Regular Evening Meeting

Tuesday, April 21, 2020
6:00 PM

Virtual Meeting

MAYOR
Lauren McLean

CITY COUNCIL MEMBERS

Council President
Elaine Clegg

Council President Pro Tem
Holli Woodings

Council Member
Patrick Bageant

Council Member
Jimmy Hallyburton

Council Member
Lisa Sánchez

Council Member
TJ Thomson

Our Vision: To Make Boise the Most Livable City in the Country
BOISE, IDAHO
City Council Agenda
6:00 PM
April 21, 2020
Virtual Meeting

I. ROLL CALL

Pursuant to Idaho Code Section 74-204(4), all agenda Items are action items, and a vote may be taken on these items.

II. REQUEST FOR APPROVAL

1. City Council Minutes - Regular Evening Meeting - Apr 14, 2020 6:00 PM

III. SPECIAL BUSINESS

1. Appointment of TJ Thomson to the Harris Ranch CID Board beginning April 2020 and ending March 2022.

   Presenter: Jade Riley, Mayor’s Office and Mallory Wilson, Fire Department
   ACTION REQUESTED: Information Only

IV. CONSENT AGENDA

******Items scheduled on Consent Agenda.

*All items with an asterisk(*) are considered to be routine by the Council and will be enacted by one motion. There will be no separate discussion on these items unless a Council Member or citizen so requests in which case the item will be removed from the general order of business and considered in its normal sequence.

*A. Expenses

*1. Request for approval of the Boise City checks 506137-506343 and ACH 62619-62669 in the total amount of $2,603,636.30 as of April 9, 2020.

*B. Resolutions

*1. RES-153-20 A RESOLUTION APPROVING AN AGREEMENT AND AWARD FOR FB 20-207; REALIGNMENT OF TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J&B BETWEEN THE CITY OF BOISE CITY (DEPARTMENT OF AVIATION) AND KNIFE RIVER CORPORATION - MOUNTAIN WEST; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID
AGREEMENT AND AWARD; AND PROVIDING AN EFFECTIVE DATE.

*2. RES-154-20 A RESOLUTION APPROVING, AS TO BOTH FORM AND CONTENT, A LEASE AGREEMENT BY AND BETWEEN THE CITY OF BOISE CITY (DEPARTMENT OF PARKS AND RECREATION) AND LOU AND VICKI MURGOITIO, BY WHICH THE MURGOITIOS ENTER A LEASE AGREEMENT WITH BOISE CITY; AUTHORIZING THE MAYOR AND CITY CLERK, RESPECTIVELY, TO EXECUTE AND ATTEST THE AGREEMENT ON BEHALF OF BOISE CITY; AND ESTABLISHING AN EFFECTIVE DATE.

*3. RES-155-20 A RESOLUTION APPROVING THE RENEWAL OF RFP 17-299(A), TRAIL BUILDING MAINTENANCE & REPAIR, BETWEEN THE CITY OF BOISE CITY (PARKS & RECREATION) AND CUDDY MOUNTAIN TRAIL COMPANY; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT; AND PROVIDING AN EFFECTIVE DATE.

*4. RES-156-20 A RESOLUTION APPROVING AN AGREEMENT, BETWEEN THE CITY OF BOISE CITY (HOUSING AND COMMUNITY DEVELOPMENT DIVISION OF PLANNING AND DEVELOPMENT SERVICES) AND CHARITABLE ASSISTANCE TO COMMUNITY’S HOMELESS (CATCH), INC.; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT; AND PROVIDING AN EFFECTIVE DATE.

*5. RES-157-20 A RESOLUTION APPROVING AN AGREEMENT AND AWARD FOR FB 20-285C; TRAVEL TRAILERS, BETWEEN THE CITY OF BOISE CITY (PUBLIC WORKS DEPARTMENT) AND CAMPING WORLD; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT AND AWARD; AND PROVIDING AN EFFECTIVE DATE.

*C. Subdivisions - Final Plats/Time Extensions

NO SUBDIVISIONS, FINAL PLATS OR TIME EXTENSIONS SCHEDULED.

V. ORDINANCES

A. First Reading

NO ORDINANCES SCHEDULED FOR THE FIRST READING CALENDAR.
B. Second Reading

NO ORDINANCES SCHEDULED FOR THE SECOND READING CALENDAR.

C. Third Reading

1. ORD-13-20  AN ORDINANCE (CAR15-00029 / COREY BARTON HOMES, INC.) ENACTING TITLE 11, CHAPTER 13, SECTION 3 OF THE BOISE CITY CODE TO CODIFY THE SYRINGA VALLEY SPECIFIC PLAN DISTRICT (SP-03) PROVISIONS PREVIOUSLY APPROVED BY BOISE CITY COUNCIL; ADOPTING THE SYRINGA VALLEY SPECIFIC PLAN APPROVED AS PART OF CAR15-00029; AMENDING TITLE 11, CHAPTER 5, TABLE 11-05.1 TO ADD REFERENCE TO SYRINGA VALLEY SPECIFIC PLAN DISTRICT; APPROVING AN ORDINANCE SUMMARY; AND ESTABLISHING AN EFFECTIVE DATE.

VI. UNFINISHED BUSINESS

NO UNFINISHED BUSINESS SCHEDULED.

VII. NEW BUSINESS

NO PURCHASING BRIEFS, SUBDIVISIONS OR PUBLIC HEARINGS SCHEDULED.

VIII. ADJOURNMENT
LEGEND:

BCC   BOISE CITY CODE
CAA   DAYCARE, GRANDFATHER RIGHTS, FENCE, HOME OCCUPATION, VARIANCE, STAFF LEVEL EXPANSIONS
CAR   ANNEXATIONS/REZONES
CFH   FLOODPLAIN/HILLSIDE
CLP   CITY LIGHTING PROJECT
CF    COMPREHENSIVE PLAN
CSN   SIGN APPLICATIONS
CSF   CITY SEWER PROJECT
CUP   CONDITIONAL USE/MODIFICATIONS
CZC   ZONING CERTIFICATES, ZONING LETTERS
CONVERSION OF DUPEX TO TOWNHOUSE
DRH   DESIGN REVIEW/MODIFICATIONS
F/B   FORMAL BID
GEO   GEOTHERMAL
LID   LOCAL IMPROVEMENT DISTRICT
RFP   REQUEST FOR PROPOSAL
RSP   REHABILITATION SEWER PROJECT
V     VARIANCE
ZO    ZONING ORDINANCE AMENDMENT

ZONING DESIGNATION:

A   OPEN LAND
CD  CONSERVATION DISTRICT OVERLAY
D   DESIGN REVIEW
DD  DOWNTOWN DESIGN REVIEW OVERLAY
BD  HISTORIC DESIGN REVIEW OVERLAY
C-1 NEIGHBORHOOD COMMERCIAL
C-2 GENERAL COMMERCIAL
C-3 SERVICE COMMERCIAL
C-4 PLANNED COMMERCIAL
C-5 CENTRAL BUSINESS DISTRICT
H   HISTORIC OVERLAY
L-O LIMITED OFFICE
M-1 LIGHT INDUSTRIAL
M-2 HEAVY INDUSTRIAL
M-4 PLANNED INDUSTRIAL
N-O NEIGHBORHOOD OFFICE
PC PEDESTRIAN COMMERCIAL
R-1 SINGLE FAMILY RESIDENTIAL
R-2 COMBINED RESIDENTIAL
R-3 MULTI-FAMILY RESIDENTIAL
R-0 RESIDENTIAL OFFICE
T-1 TECHNOLOGICAL-INDUST. PARK
T-2 TECHNOLOGICAL-MANUFACTURING PARK
U   UNIVERSITY

Arrangements for auxiliary aids and services necessary for effective communication for qualified persons with disabilities or language assistance requests need to be made as soon as possible, but no later than three working days before the scheduled meeting. Please contact the City Clerk if an auxiliary aid is needed.

RECONSIDERATION OF VOTE
(A council member who voted on the prevailing side of an agenda item at the last regularly scheduled meeting may move for reconsideration under the rules of procedure adopted by the council, Boise City Code 1-02-16). This may occur at anytime during the Council meeting.
I. ROLL CALL

PRESENT: McLean (Remote), Clegg (Remote), Woodings (Remote), Bageant (Remote), Hallyburton (Remote), Sánchez (Remote), Thomson (Remote)

ABSENT:

Motion to defer consideration of Resolution 148-20 to a later date, deferral is necessary because the contractor was unable to execute the Agreement in time for tonight’s meeting.

RESULT: APPROVED [UNANIMOUS]

MOVER: Elaine Clegg, Council President
SECONDER: TJ Thomson, Council Member
AYES: Clegg, Woodings, Bageant, Hallyburton, Sánchez, Thomson

Pursuant to Idaho Code Section 74-204(4), all agenda Items are action items, and a vote may be taken on these items.

II. REQUEST FOR APPROVAL

1. City Council - Work Session - Apr 7, 2020 5:00 PM

RESULT: ACCEPTED [UNANIMOUS]

MOVER: Elaine Clegg, Council President
SECONDER: Holli Woodings, Council President Pro Tem
AYES: Clegg, Woodings, Bageant, Hallyburton, Sánchez, Thomson

2. City Council - Regular Evening Meeting - Apr 7, 2020 6:00 PM

RESULT: ACCEPTED [UNANIMOUS]

MOVER: Elaine Clegg, Council President
SECONDER: Holli Woodings, Council President Pro Tem
AYES: Clegg, Woodings, Bageant, Hallyburton, Sánchez, Thomson

III. SPECIAL BUSINESS

1. Re-Appointment of Tom K Brown to the Electrical Code Board for a 4 year term ending April 2024
RESULT: APPROVED BY UNANIMOUS CONSENT

2. Interim Budget Changes (5 minutes)
Presenter: Shannon Cade, Finance & Administration

Eric Bilimora, Finance & Administration presented the item to Council on behalf of Shannon Cade.

RESULT: APPROVED [UNANIMOUS]
MOVER: Elaine Clegg, Council President
SECONDER: Holli Woodings, Council President Pro Tem
AYES: Clegg, Woodings, Bageant, Hallyburton, Sánchez, Thomson

Presenter: Jade Riley, Mayor’s Office and Mallory Wilson, Fire Department

RESULT: DISCUSSED

IV. CONSENT AGENDA

******Items scheduled on Consent Agenda.

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RESULT: APPROVED [UNANIMOUS]
MOVER: Elaine Clegg, Council President
SECONDER: Holli Woodings, Council President Pro Tem
AYES: Clegg, Woodings, Bageant, Hallyburton, Sánchez, Thomson

* ******Items scheduled on Consent Agenda.

* All items with an asterisk(*) are considered to be routine by the Council and will be enacted by one motion. There will be no separate discussion on these items unless a Council Member or citizen so requests in which case the item will be removed from the general order of business and considered in its normal sequence.

A. EXPENSES

*1. Request for approval of the Boise City checks 505695-505943 and ACH 62468-62531 in the total amount of $1,892,375.42 as of March 26, 2020.

*2. Request for approval of the Boise City checks 505944-506122 and ACH 62536-62608 in the total amount of $2,032,822.79 as of April 2, 2020.
B. PUBLIC HEARING REQUESTS

*1. ZOA19-00006 / Boise City Planning and Development Services / Amendment to Chapter 11-08 (Flood Hazard Regulations) of the development code to add definitions, reference an updated Flood Insurance Study, update and clarify existing regulations. A requirement for increased freeboard above the base flood elevation is included

C. MINUTES AND REPORTS

*1. Internal Audit FY20 Second Quarter Report, April 2020

D. RESOLUTIONS

*1. RES-136-20 A RESOLUTION APPROVING THE RENEWAL OF RFP 19-269(B), POND WATER TREATMENT SERVICES, BETWEEN THE CITY OF BOISE CITY (PARKS AND RECREATION) AND ECOLAKE, LLC; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT; AND PROVIDING AN EFFECTIVE DATE.

*2. RES-137-20 A RESOLUTION APPROVING AUTHORIZATION TO PROCURE CP 20-282 SAFARILAND BODY ARMOR BETWEEN THE CITY OF BOISE CITY (POLICE DEPARTMENT) AND PROFORCE LAW ENFORCEMENT OFF OF IDAHO STATE CONTRACT PADD 17200144; AND PROVIDING AN EFFECTIVE DATE.

*3. RES-138-20 A RESOLUTION APPROVING THE CONVEYANCE OF A PORTION OF GREENBELT PROPERTY FROM ADA COUNTY TO BOISE CITY; AND ESTABLISHING AN EFFECTIVE DATE.

*4. RES-139-20 A RESOLUTION APPROVING AN ASSIGNMENT AND ASSUMPTION OF A LICENSE AGREEMENT FOR EMERGENCY GATED ACCESS BY AND BETWEEN THE CITY OF BOISE CITY, MW GOING CONCERN, LLC, MW DESERT FLORA, LLC, MW PARKVIEW, LLC, AND MW PARKVIEW INVESTORS, LLC; AND ESTABLISHING AN EFFECTIVE DATE.

*5. RES-140-20 A RESOLUTION APPROVING AN AMENDMENT TO AN EXISTING GRANT BY AND BETWEEN THE UNITED STATES DEPARTMENT OF AGRICULTURE (FOREST SERVICE) AND THE CITY OF BOISE CITY (PARKS AND
RECREATION); AND ESTABLISHING AN EFFECTIVE DATE.

*6. RES-141-20 A RESOLUTION APPROVING A MEMORANDUM OF AGREEMENT, BETWEEN THE CITY OF BOISE CITY (HOUSING AND COMMUNITY DEVELOPMENT DIVISION OF PLANNING AND DEVELOPMENT SERVICES) AND ADA COUNTY, FOR REIMBURSEMENT OF EXPENDITURES RELATED TO SHORT TERM HOUSING OF INDIGENT FAMILIES EXPERIENCING HOMELESSNESS; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT; AND PROVIDING AN EFFECTIVE DATE.

*7. RES-142-20 A RESOLUTION RATIFYING TWO AGREEMENTS, BETWEEN THE CITY OF BOISE CITY, THE RIVERSIDE HOTEL, AND INTERFAITH SANCTUARY; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY RATIFY AND ATTEST SAID AGREEMENTS; AND PROVIDING AN EFFECTIVE DATE.

*8. RES-143-20 A RESOLUTION APPROVING THE FACILITY AGREEMENT, BETWEEN THE CITY OF BOISE CITY AND ELDA ID BO, LLC (DBA COTTONWOOD SUITES); AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT; AND PROVIDING AN EFFECTIVE DATE.

*9. RES-144-20 A RESOLUTION RATIFYING THE REISSUED PUBLIC HEALTH EMERGENCY ORDER 20-01 (SUSPENSION OF PUBLIC MEETINGS) DATED APRIL 8, 2020; AND PROVIDING AN EFFECTIVE DATE.

*10. RES-145-20 A RESOLUTION ESTABLISHING THE 2020 MINIMUM COMMODITY SALE PRICES FOR CROPS PRODUCED AT THE BOISE CITY (PUBLIC WORKS DEPARTMENT) TWENTY MILE SOUTH FARM; AUTHORIZING THE BOISE PUBLIC WORKS DIRECTOR OR HIS DESIGNEE TO EXECUTE CROP SALES AGREEMENTS ON BEHALF OF BOISE CITY; AND PROVIDING AN EFFECTIVE DATE.

*11. RES-146-20 A RESOLUTION APPROVING AN AGREEMENT AND AWARD FOR FB 20-285A; TRAVEL TRAILERS, BETWEEN THE CITY OF BOISE CITY (PUBLIC WORKS DEPARTMENT) AND BISH’S RV; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE
AND ATTEST SAID AGREEMENT AND AWARD; AND PROVIDING AN EFFECTIVE DATE.

*12. RES-147-20 A RESOLUTION APPROVING AN AGREEMENT AND AWARD FOR FB 20-285B; TRAVEL TRAILERS, BETWEEN THE CITY OF BOISE CITY (PUBLIC WORKS DEPARTMENT) AND BRETZ RV; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT AND AWARD; AND PROVIDING AN EFFECTIVE DATE.

*13. RES-148-20 A RESOLUTION APPROVING AN AGREEMENT AND AWARD FOR FB 20-285C; TRAVEL TRAILERS, BETWEEN THE CITY OF BOISE CITY (PUBLIC WORKS DEPARTMENT) AND CAMPING WORLD; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT AND AWARD; AND PROVIDING AN EFFECTIVE DATE.

At the beginning of the meeting, RES-148-20 was deferred to a later date.

*14. RES-149-20 A RESOLUTION APPROVING AN AGREEMENT AND AWARD FOR FB 20-285D; TRAVEL TRAILERS, BETWEEN THE CITY OF BOISE CITY (PUBLIC WORKS DEPARTMENT) AND DENNIS DILLON RV AND MARINE; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT AND AWARD; AND PROVIDING AN EFFECTIVE DATE.

*15. RES-150-20 A RESOLUTION PROVIDING THE AIRPORT DIRECTOR TEMPORARY ADDITIONAL POWERS, INCLUDING SIGNATORY AUTHORITY TO AMEND AIRPORT CONTRACTS PROVIDED THAT SUCH AMENDMENTS COMPLY WITH CERTAIN GUIDELINES; PROVIDING FOR A TERMINATION DATE OF SUCH ADDITIONAL POWERS; AND PROVIDING AN EFFECTIVE DATE.

*16. RES-151-20 A RESOLUTION APPROVING THE EASEMENT AGREEMENT FOR EMERGENCY ACCESS BETWEEN SHUCKLE LLC, AND THE CITY OF BOISE CITY (FIRE DEPARTMENT) FOR AN EMERGENCY VEHICLE ACCESS EASEMENT THAT IS REQUIRED FOR THE DEVELOPMENT OF THE SENARY POINT SUBDIVISION LOCATED AT CORNER OF PIERCE PARK LANE AND CASTLE DRIVE, BOISE, IDAHO 83703; AND PROVIDING AN EFFECTIVE DATE.
*17. **RES-152-20**  A RESOLUTION RATIFYING PUBLIC HEALTH EMERGENCY ORDER 20-04 (ADDITIONAL MEASURES SUPPLEMENTING IDAHO DEPARTMENT OF HEALTH AND WELFARE ORDER TO SELF-ISOLATE DATED MARCH 25, 2020) ENACTED APRIL 11, 2020; AND PROVIDING AN EFFECTIVE DATE.

V. ORDINANCES

A. *SECOND READING*

Moved that all ordinances on second reading be read by number and title only and filed for the Third Reading Calendar.

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<td>AYES:</td>
<td>Clegg, Woodings, Bageant, Hallyburton, Sánchez, Thomson</td>
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1. **ORD-13-20**  AN ORDINANCE (CAR15-00029 / COREY BARTON HOMES, INC.) ENACTING TITLE 11, CHAPTER 13, SECTION 3 OF THE BOISE CITY CODE TO CODIFY THE SYRINGA VALLEY SPECIFIC PLAN DISTRICT (SP-03) PROVISIONS PREVIOUSLY APPROVED BY BOISE CITY COUNCIL; ADOPTING THE SYRINGA VALLEY SPECIFIC PLAN APPROVED AS PART OF CAR15-00029; AMENDING TITLE 11, CHAPTER 5, TABLE 11-05.1 TO ADD REFERENCE TO SYRINGA VALLEY SPECIFIC PLAN DISTRICT; APPROVING AN ORDINANCE SUMMARY; AND ESTABLISHING AN EFFECTIVE DATE.

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2. **ORD-14-20**  AN ORDINANCE REPEALING BOISE CITY CODE TITLE 6, CHAPTER 18, ENTITLED “USE OF MOBILE ELECTRONIC DEVICES WHILE DRIVING” AND PROVIDING AN EFFECTIVE DATE.

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VI. ADJOURNMENT

Motion to adjourn the City Council meeting.
RESULT: APPROVED [UNANIMOUS]
MOVER: Elaine Clegg, Council President
SECONDER: Holli Woodings, Council President Pro Tem
AYES: Clegg, Woodings, Bageant, Hallyburton, Sánchez, Thomson

APPROVE:

Lauren McLean, Mayor

ATTEST:

Lynda Lowry, Ex-Officio City Clerk
## CURRENT EXPENSE CASH PAYMENT REGISTER

04/09/20

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2,603,636.30
TO: Mayor and Council
FROM: Colin Millar, Purchasing
NUMBER: RES-153-20
DATE: April 10, 2020
SUBJECT: FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River; $4,103,685

BACKGROUND:

This project will realign Taxiway H to serve as an end connector taxiway to future Runway 10R threshold. A future project includes extension of Taxiway B that will intersect with new Taxiway H. New Taxiway H will be constructed with new 30-foot wide shoulders to meet current FAA Taxiway Design Group (TDG) 5 criteria. Drainage improvements include new underdrain system that will connect to the existing drainage system. Electrical improvements include new base cans, taxiway edge lights, conduit, and new taxiway guidance signs.

BID RESULTS:

The bids were opened March 25, 2020, at 11:00am local time. Twenty five (25) companies received plan sets and were entered on the plan holders list. Two (2) bids were received.

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Airport staff have reviewed the bids for accuracy, completeness, and responsiveness. The lowest responsive bidder, Knife River, has been contacted by Airport staff and indicated that they would like to proceed with the project.
RECOMMENDATION:

Department of Finance and Administration and Department of Aviation staff recommend that FB 20-207 is awarded to the lowest responsive bidder, Knife River Corporation - Mountain West, not to exceed $4,103,685.00. Award of this contract is subject to compliance with requirements.

FINANCIAL IMPACT:

Department has confirmed sufficient funding is available for this obligation.

ATTACHMENTS:

- FB 20-207 Contract for Council Approval  (PDF)
- FB 20-207 Specifications (E) (PDF)
- FB 20-207 Drawings (E)  (PDF)
- FB 20-207 Knife River  (PDF)
- FB 20-207 Addendum 1 (E)  (PDF)
- FB 20-207 Addendum 2 (E)  (PDF)
- FB 20-207 Addendum 3 (E)  (PDF)
BY THE COUNCIL

BAGEANT, CLEGG, HALLYBURTON, SANCHEZ, THOMSON AND WOODINGS

A RESOLUTION APPROVING AN AGREEMENT AND AWARD FOR FB 20-207; REALIGNMENT OF TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J&B BETWEEN THE CITY OF BOISE CITY (DEPARTMENT OF AVIATION) AND KNIFE RIVER CORPORATION - MOUNTAIN WEST; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT AND AWARD; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Department of Finance and Administration and Department of Aviation staff recommend award of FB 20-207; Realignment of Taxiway H & Mill/Overlay Portions of Taxiways J&B, to the lowest, responsive bidder, Knife River Corporation - Mountain West.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF BOISE CITY, IDAHO:

Section 1. That the Agreement and Award for FB 20-207; Realignment of Taxiway H & Mill/Overlay Portions of Taxiways J&B by and between the city of Boise City and Knife River Corporation - Mountain West, attached hereto and incorporated herein by reference, be, and the same is hereby, approved as to both form and content.

Section 2. That the Mayor and City Clerk be, and they hereby are, authorized to respectively execute and attest said Agreement and Award for and on behalf of the city of Boise City.

Section 3. That this Resolution shall be in full force and effect immediately upon its adoption and approval.
NOTICE OF AWARD

STATE OF IDAHO
CITY OF BOISE

THIS CONTRACT AWARD made this ______ day of ____________, 20___ by the City of Boise, Idaho, hereinafter called the OWNER, to Knife River Corporation – Mountain West, 5450 W. Gowen Road, Boise, ID 83709

hereinafter called the CONTRACTOR, is for the completion of a certain project described as: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B FAA AIP Project No. 3-16-0003-073-2020, City Project No. F/B 20-207 for the use and benefit of the Owner as shown on the plans and described in the specifications as prepared by:

RS&H, Inc.
5215 Wiley Post Way, Suite 510
Salt Lake City, Utah 84116

The project consists of the Base Bid plus the following Alternates, if applicable:

Realignment of Taxiway H and Mill/Overlay Portions of Taxiways J and B

The consideration to be paid by the Owner to the Contractor for completion of the project in accordance with the contract documents is the sum of Four Million One Hundred Thirty Thousand Six Hundred Eighty-Five Dollars and No cents ($4,130,685.00)
Commencement of work under this contract shall begin on the effective date of the Contractor’s receipt of a Notice to Proceed issued by the Owner and the project is to be fully completed per the calendar days as specified under Section 80-08 unless otherwise subsequently agreed.

OWNER: City of Boise

By: ____________________________________________

Name

Signature

Printed Name

Title

Acknowledgement of Receipt of Contract Award by Contractor:

Knife River Corporation - Mountain West

Name

Signature

Jesse Rosin

Printed Name

Authorized Agent

Title

DATE: 4/3/2020
Construction Contract Agreement  
Purchasing Contract Number F/B 20-207

Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

Contractor: Knife River Corporation - Mountain West

Owner: City of Boise – Boise Airport, Ada County, Idaho, a municipal corporation

THIS AGREEMENT, made this ________ day of ________, 2020, by and between the City of Boise, a municipal corporation organized under the laws of the State of Idaho, hereinafter referred to as "Owner", and Contractor, hereinafter referred to as "Contractor", a corporation organized under the laws of the State of Idaho.

The Contractor shall commence work with adequate force and equipment on the dates to be specified in a written order of the Owner and shall substantially complete within 90 Calendar Days from and including the dates stipulated in the "Notice to Proceed."

The Contractor shall fully guarantee his workmanship and materials furnished for a period of one year following the date of final acceptance of the work. The performance and payment bonds shall remain in full force for this one year period.

If Contractor fails to complete the Work by the date specified herein for achievement of Substantial Completion, such as date may be adjusted pursuant to the Contract Documents, Owner shall deduct from progress payments or any other funds remaining due to Contractor or, if no funds remain due, Contractor shall pay to Owner the amount specified under the Supplemental Provisions, Subsection 80-08 of the General Provisions for each day that the Work remains uncompleted beyond the specified Substantial Completion Date for each phase of work. Such sum is hereby, in view of the difficulty of estimating such damages, agreed upon by Contractor and Owner as liquidated damages of $2500 per calendar day that Owner shall suffer by such default and not by way of penalty.

1. Statement of Work: The Contractor shall furnish labor, material and equipment for, and perform the work described herein for the consideration stipulated, and in compliance with State and City Codes. Contract documents consist of the following together with any amendments that may be agreed to in writing by both parties:

Bid Proposal  
Contract Agreement  
Specifications  
Acknowledgements  
Property "All-Risk" Insurance  
Performance Bond  
Labor & Payment Bond  
Liability Insurance  
Workers' Compensation  
Automobile Insurance

2. Amount of Contract: In an amount Not to Exceed: $4,103,685.00

3. Term of Contract: The work to be performed under this contract shall commence upon receipt of Notice to Proceed as provided in the General Provisions, and shall terminate in 90 calendar days, unless sooner terminated as herein provided.

Schedule I (Federal) project work includes: Reconstruct Taxiway H to be perpendicular with Runway 10R-28L and mill and overlay Taxiways J and B. Schedule II (Non-Federal) project work includes: Fill infield areas along Taxiway H with crushed aggregate and construct two (2) 72 square yard Portland Cement concrete pads at the UPS West Ramp. Schedule I and II will be completed during the 2020 construction season and have a total contract time of 90 calendar days for substantial completion.

4. Indemnification and Insurance:
The Contractor shall indemnify and save and hold harmless the Owner from and for any and all losses, claims, actions, judgments for damages, or injury to persons or property and losses and expenses caused or incurred by the Contractor, its servants, agents, employees, guests, and business invitees, and not caused by or arising out of the tortious conduct of Owner or its employees. In addition, the Contractor shall maintain, and specifically agrees that it will maintain, throughout the term of this Agreement, liability insurance, in which the Owner shall be named an additional insured in the minimum amount as specified in the Idaho Tort Claims Act set forth in Title 6, Chapter 9 of the Idaho Code (currently, a minimum of $1,000,000). The limits of insurance shall not be deemed a limitation of the covenants to indemnify and save and hold harmless Owner; and if Owner becomes liable for an amount in excess of the insurance limits, herein provided, the Contractor covenants and agrees to indemnify and save and hold harmless Owner from and for all such losses, claims, actions, or judgments for damages or liability to persons or property. The Contractor shall provide Owner with a Certificate of Insurance, or other proof of insurance evidencing compliance with the requirements of this paragraph and file such proof of insurance with the Owner. In the event the insurance minimums are changed, Contractor shall immediately submit proof of compliance with the changed limits.

Contractor shall maintain automobile insurance with a limit of no less than $500,000 per occurrence for owned, non-owned and hired vehicles. If Contractor has no owned motor vehicles, then hired and non-owned motor vehicle liability coverage with limits not less than $500,000 per accident for bodily injury and property damage is required. Where applicable, the City of Boise shall be named as an additional insured.

Contractor shall secure, pay for and maintain all-risk or special form builders risk insurance, covering risks of physical loss or damage to the Facility (including without limitation the transmission lines to the interconnection facilities, buildings, temporary structures, materials, supplies and equipment to be incorporated in the Work), from perils including, but not limited to, fire, collapse, flood, earth movement, lightning, collapse, testing, debris removal, demolition and increased cost of construction, expediting expense, extra expense and all other perils not specifically excluded under a standard "all-risk" or special form builders risk policy. Such insurance shall cover all property during construction and testing, and shall include the Owner, Design-Builders, Consultants, Contractors, and Subcontractors to the Project as insureds. The policy shall be written on a replacement cost basis and shall contain an agreed amount endorsement waiving any co-insurance penalty.

Additionally, the Contractor shall have and maintain during the life of this contract, statutory Workers Compensation, regardless of the number of employees, or lack thereof, to be engaged in work on the project under this agreement (including himself) in the statutory limits as required by law. In case any such work is sublet, the Contractor shall require the subcontractor provide Workers Compensation Insurance for himself and any/all the latter's employees to be engaged in such work. Proof of insurance must be provided to the owner prior to the start of work.

Proof of insurance shall be provided to City of Boise, (Purchasing Office), P.O. Box 500, Boise, ID. 83701.

5. Independent Contractor: In all matters pertaining to this agreement, the Contractor shall be acting as an independent contractor, and neither the contractor nor any officer, employee or agent of the contractor will be deemed an employee of City. The selection and designation of the personnel of the Owner in the performance of this agreement shall be made by the Owner.

6. Compensation: For performing the services specified in Section 1 herein, Owner agrees to reimburse Contractor according to the attached bid specification. Payment will not include any sub-contract or other personal services pay except as may be agreed to in writing in advance by the parties. Change Orders may be issued, subject to Purchasing/Council approval.

7. Method of Payment: Contractor will invoice the (Insert Department name and address) directly for all current amounts earned under this Agreement. Owner will pay all invoices within forty-five (45) days after receipt of acceptable invoice.
8. **Notices:** Any and all notices required to be given by either of the parties hereto, unless otherwise stated in this agreement, shall be in writing and be deemed communicated when mailed in the United States mail, certified, return receipt requested, addressed as follows:

City of Boise  
Boise Airport  
P. O. Box 500  
Boise, Idaho 83701

Knife River Corporation - Mountain West  
5450 W Gowen Road  
Boise, ID 83709

Either party may change their address for the purpose of this paragraph by giving written notice of such change to the other in the manner herein provided.

9. **Attorney Fees:** Should any litigation be commenced between the parties hereto concerning this Agreement, the prevailing party shall be entitled, in addition to any other relief as may be granted, to court costs and reasonable attorneys fees as determined by a Court of competent jurisdiction. This provision shall be deemed to be a separate contract between the parties and shall survive any default, termination or forfeiture of this Agreement.

10. **Time is of the Essence:** The parties hereto acknowledge and agree that time is strictly of the essence with respect to each and every term, condition and provision hereof, and that the failure to timely perform any of the obligations hereunder will constitute a breach of, and a default under, this Agreement by the party so failing to perform.

11. **Force Majeure:** Any delays in or failure of performance by Contractor shall not constitute a breach or default hereunder if and to the extent such delays or failures of performance are caused by occurrences beyond the reasonable control of Contractor, including but not limited to, acts of God or the public enemy; compliance with any order or request of any governmental authority; fires, floods, explosion, accidents; riots, strikes or other concerted acts of workmen, whether direct or indirect; or any causes, whether or not of the same class or kind as those specifically named above, which are not within the reasonable control of Contractor. In the event that any event of force majeure as herein defined occurs, Contractor shall be entitled to a reasonable extension of time for performance of its Services under this Agreement.

12. **Assignment:** It is expressly agreed and understood by the parties hereto, that the Contractor shall not have the right to assign, transfer, hypothecate or sell any of its rights under this Agreement except upon the prior express written consent of Owner.

13. **Discrimination Prohibited:** In performing the Services required herein, the Contractor shall not discriminate against any person on the basis of race, color, religion, sex, sexual orientation, gender identity/expression, national origin or ancestry, age or physical disability.

14. **Reports and Information:** At such times and in such forms as Owner may require, there will be furnished to Owner such statements, records, reports, data and information as Owner may request pertaining to matters covered by this Agreement.

15. **Audits and Inspections:** At any time during normal business hours and as often as the Owner may deem necessary, there shall be made available to the Owner for examination all of Vendor's records with respect to all matters covered by this Agreement. Vendor shall permit the Owner to audit, examine, and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment and other data relating to all matters covered by this Agreement.
16. **Compliance with Laws:** In performing the scope of services required hereunder, the Contractor shall comply with all applicable laws, ordinances, and codes of Federal, State, and local governments.

17. **Changes:** The Owner may, from time to time, request changes in the Scope of Work to be performed hereunder. Such changes, and any increase or decrease in the contractor’s compensation, which are mutually agreed upon by and between the Owner and the Contractor, shall be incorporated in written amendments to this Agreement.

18. **Termination for Cause:** If, through any cause, the contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Agreement, the Owner shall thereupon have the right to terminate this Agreement by giving written notice to the contractor of such termination and specifying the effective date thereof at least fifteen (15) days before the effective date of such termination. If this agreement is terminated for cause the Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

Notwithstanding the above, the contractor shall not be relieved of liability to the Owner for damages sustained by the Owner by virtue of any breach of this Agreement by the Contractor, and the Owner may withhold any payments to the Contractor for the purposes of set-off until such time as the exact amount of damages due the Owner from the Contractor is determined. This provision shall survive the termination of this agreement and shall not relieve the contractor of its liability to the Owner for damages, provided that the amount of such damages shall not exceed the total compensation provided for in section two of this agreement.

19. **Termination for Convenience of City:** Owner may terminate this Agreement at any time by giving at least fifteen (15) days notice in writing to the Contractor. If the Agreement is terminated by Owner as provided herein, Contractor will be paid an amount which bears the same ratio to the total compensation as the work actually performed bear to the total services of Contractor covered by this Agreement, less payments of compensation previously made. If this Agreement is terminated due to the fault of Contractor, Section 18 hereof relative to termination will apply.

20. **Contractor to Pay or Secure Taxes:** The contractor in consideration of securing the business of providing: 1) To pay promptly when all taxes due (other than on real property), excises and license fees due the state, its subdivisions, and municipal and quasi-municipal corporations therein, accrued or accruing in accordance with conditions of this Agreement, whether or not the same shall be payable at the end of such term; 2) That if said taxes, excises and license fees are not payable at the end of said term, but liability for the payment thereof exists, even though the same constitute liens upon the Contractor’s property, to secure the same to the satisfaction of the respective officers charged with the collection thereof; and 3) That, in the event of default in the payment or securing of such taxes, excises, and license fees, that Boise City may withhold from any payment due the Contractor hereunder the estimated amount of such accrued taxes, excises and license fees for the benefit of all taxing units to which said the Contractor is liable.

21. **Construction and Severability:** If any part of this Agreement is held to be invalid or unenforceable, such holding will not affect the validity or enforceability of any other part of this Agreement so long as the remainder of the Agreement is reasonably capable of completion.

22. **Non-Appropriation:** Should funding become not available, due to lack of appropriation, the Owner may terminate this agreement upon 30 (thirty) days notice.

23. ** Entire Agreement:** This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.
24. **Applicable Law.** This Agreement shall be governed by and construed and enforced in accordance with
the laws of the State of Idaho, and the ordinances of the City of Boise.

25. **Approval Required.** This Agreement shall not become effective or binding until approved by the City
of Boise.

26. **Acceptance and Final Payment:** Upon receipt of notice that the work is ready for final acceptance and
inspection, the Owner's representative will make such inspection and when he finds the work acceptable
and the contract fully performed he will have the Contractor issue a final payment request.

**END OF CONTRACT**
IN WITNESS WHEREOF, the City and the contractor/vendor have executed this Agreement as of the date first above written.

Knife River Corporation – Mountain West
5450 W Gowen Road
Boise, ID 83709

[Signature]  4/3/2020  [Date]

Jessee Rosin - Authorized Agent  
Print Name

ACKNOWLEDGEMENT

State of  Idaho  
County of  Ada  

On this  3rd  day of  April  2020, before me personally appeared  Jessee Rosin  
known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is  an Authorized Agent  
and that he/she executed the foregoing instrument on behalf of said firm for the use and purposes stated therein.

[Notary Signature]

Witness my hand and official seal

TRACY BLACK  
PUBLIC NOTARY  
STATE OF IDAHO

CITY OF BOISE  
BOISE AIRPORT  
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

C-9  
CONTRACT FORMS  
FEBRUARY 28, 2020  
ISSUED FOR BID
LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That we Knife River Corporation - Mountain West, 5450 W. Gowen Road, Boise, ID 83709

as Principal, and the ______________ corporation,

as Surety, are held and firmly bound unto Boise City, a Municipal Corporation in the State of Idaho.

As Obligee, in the sum of ____________________________ Dollars,

being 100% of the contract price, in lawful money of the United States, for which sum, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, Contractor has by written agreement dated __________, 20___ enter into a contract

WHEREAS, on the _____ Day of ________________, 20___, the principal entered into a

contract with the Obligee for ____________________________________________

Which contract is by reference made a part hereof and, hereafter referred to as the Contract:

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the principal will pay all laborers, mechanics, subcontractors, material suppliers and all persons who will supply said Principal or said subcontractors with provisions and supplies for the carrying on of such work, then this obligation will be null and void, otherwise to remain in full force and effect.

Signed and Sealed this ______ day of ______________, A.D. 20________________

___________________________________________
Principal

___________________________________________
Insurance Company

___________________________________________
Attorney-in-Fact

By: ____________________________

Note: this form or a reasonable facsimile is to be completed and delivered to City of Boise Purchasing Office when contracts are signed.
FAA REQUIRED CONTRACT PROVISIONS

FAA REQUIRED CONTRACT PROVISIONS. These provisions are hereby made part of this contract, as required.

1. **ACCESS TO RECORDS AND REPORTS**

   **ACCESS TO RECORDS AND REPORTS**

   The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

2. **AFFIRMATIVE ACTION REQUIREMENT**
   (Reference: 41 CFR part 60-4, Executive Order 11246)

   **NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION**

   1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

   2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

      A. Timetables
      B. Goals for minority participation for each trade (2.8%)
      C. Goals for female participation in each trade (6.9%)

   These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor is also subject to the goals for both its federally involved and non-federally involved construction.

   The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training shall be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project, for the sole purpose of meeting the contractor's goals, shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

   3. The contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs (OFCCP), within 10 working days of award of any construction subcontract in excess of $10,000
at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" Lane, Douglas, Linn and Benton Counties.

3. **BREACH OF CONTRACT TERMS**

(Reference 2 CFR § 200 Appendix II(A))

**BREACH OF CONTRACT TERMS**

Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the Contractor must correct the breach. Owner may proceed with termination of the contract if the Contractor fails to correct the breach by deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.
4. **BUY AMERICAN PREFERENCE**  
*(Reference: 49 USC § 50101)*

**BUY AMERICAN CERTIFICATION**

The contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP-funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Exception Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or Offeror must complete and submit the Buy America certification included herein with their bid or offers. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance.

**Certificate of Buy American Compliance for Manufactured Products**

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

- **✓** Bidder or Offeror hereby certifies that it will comply with 49 USC § 50101 by:
  a) Only installing steel and manufactured products produced in the United States, or;
  b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;
  c) Installing products listed as an Exception Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

  By selecting this certification statement, the bidder or Offeror agrees:
  1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
  2. To faithfully comply with providing US domestic product.
  3. To furnish US domestic product for any waiver request that the FAA rejects.
  4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

- **☐** The bidder or Offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or Offeror with the apparent low bid agrees:
  1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.
  2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
  3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
  4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

**Required Documentation**
Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more than 60% of the cost of all components and subcomponents of the "item". The required documentation for a type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety)

b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.

c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

a) Detailed cost information for total project using US domestic product

b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

4/3/2020
Date

[Signature]

Knife River Corporation - Mountain West
Company Name

Jessee Rosin - Authorized Agent
Title
5. **CIVIL RIGHTS - GENERAL**  
*(Reference: 49 USC § 47123)*

**GENERAL CIVIL RIGHTS PROVISIONS**

The contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the contractors and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

6. **CIVIL RIGHTS – TITLE VI ASSURANCES**  
*(Reference: 49 USC § 47123, FAA Order 1400.11)*

**Title VI Clauses for Compliance with Nondiscrimination Requirements:**

**Compliance with Nondiscrimination Requirements**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Statutes and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the contractor under the contract until the contractor complies; and/or

b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

**Title VI List of Pertinent Nondiscrimination Acts and Authorities**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);

- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);


- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);

- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
• Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

• The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

• Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

• Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

• Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

7. CLEAN AIR AND WATER POLLUTION CONTROL
(Reference: 2 CFR § 200, Appendix II(G))

CLEAN AIR AND WATER POLLUTION CONTROL

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671c) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds $150,000.

8. CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS
(Reference: 2 CFR § 200 Appendix II (E))

CONTRACT WORK HOURS AND SAFETY STANDARDS ACT REQUIREMENTS

1. Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.
In the event of any violation of the clause set forth in paragraph (1) of this clause, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this clause.

4. Subcontractors.

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

9. **COPELAND “ANTI-KICKBACK” ACT**

(Reference: 2 CFR § 200 Appendix II(D), 29 CFR parts 3 & 5)

**COPELAND “ANTI-KICKBACK” ACT**

Contractor must comply with the requirements of the Copeland “Anti-Kickback” Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

10. **DAVIS-BACON REQUIREMENTS**

(Reference: 2 CFR § 200 Appendix II(D), 29 CFR Part 5)

**DAVIS-BACON REQUIREMENTS**

1. Minimum Wages

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of
payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer’s payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conforming under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding.

The Federal Aviation Administration or the sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals.
Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site.

The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;

(2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.
(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman’s hourly rate) specified in the contractor’s or subcontractor’s registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice’s level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee’s level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a
training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements.

The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.


The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.


A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.


Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).


11. DEBARMENT AND SUSPENSION (NON-PROCUREMENT)

(Reference: 2 CFR part 180 (Subpart C), 2 CFR part 1200, DOT Order 4200.5)

CERTIFICATE OF OFFERER/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.
CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMING

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract if the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

12. DISADVANTAGED BUSINESS ENTERPRISE
(Reference: 49 CFR part 26)

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§ 26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than {specify number} days from the receipt of each payment the prime contractor receives from {Name of recipient}. The prime contractor agrees further to return retainage payments to each subcontractor within {specify the same number as above} days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the {Name of Recipient}. This clause applies to both DBE and non-DBE subcontractors.

13. DISTRACTED DRIVING
(Reference: Executive Order 13513, DOT Order 3902.10)

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 and involve driving a motor vehicle in performance of work activities associated with the project.
14. **ENERGY CONSERVATION REQUIREMENTS**  
*(Reference: 2 CFR § 200 Appendix II(H))*

**ENERGY CONSERVATION REQUIREMENTS**

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201et seq).

15. **EQUAL OPPORTUNITY CLAUSE AND SPECIFICATIONS**  
*(Reference: 2 CFR 200, Appendix II(C), 41 CFR § 60-1.4, 41 CFR § 60-4.3, Executive Order 11246)*

**EQUAL OPPORTUNITY CLAUSE**

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules,
regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS

1. As used in these specifications:
   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
   b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
   c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
   d. "Minority" includes:
      (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
      (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
      (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted
are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and
trainee programs relevant to the contractor’s employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the contractor’s EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company’s EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor’s EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor’s EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor’s recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor’s workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor’s obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
p. Conduct a review, at least annually, of all supervisor’s adherence to and performance under the contractor’s EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor’s minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor’s and failure of such a group to fulfill an obligation shall not be a defense for the contractor’s noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program)
16. **FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)**  
(Reference: 29 USC § 201, et seq.)

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers.

The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

**LOBBying AND INFLUENCING FEDERAL EMPLOYEES**  
(Reference: 31 USC § 1352 – Byrd Anti-Lobbying Amendment, 2 CFR part 200, Appendix li(i), 49 CFR part 20, Appendix A)

**CERTIFICATION REGARDING LOBBYING**

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.
17. **PROHIBITION OF SEGREGATED FACILITIES**  
(Reference: 41 CFR \$ 60)

PROHIBITION OF SEGREGATED FACILITIES

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants, and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

18. **OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970**  
(Reference: 20 CFR part 1910)

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor - Occupational Safety and Health Administration.

19. **PROCUREMENT OF RECOVERED MATERIALS**  
(Reference: 2 CFR \$ 200.322, 40 CFR part 247)

PROCUREMENT OF RECOVERED MATERIALS

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

a) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or,

b) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at [www.epa.gov/epawaste/conserve/tools/cpg/products/](http://www.epa.gov/epawaste/conserve/tools/cpg/products/).

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:
a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
b) Fails to meet reasonable contract performance requirements; or
c) Is only available at an unreasonable price.

20. **RIGHT TO INVENTIONS**
(Reference: 2 CFR § 200 Appendix II(F), 37 CFR §401)

**RIGHTS TO INVENTIONS**

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within in the 37 CFR §401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental or research work.

21. **TERMINATION OF CONTRACT**
(Reference: 2 CFR § 200 Appendix II(B), FAA Advisory Circular 150/5370-10, Section 80-09)

**TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)**

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

c) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
d) documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
e) reasonable and substantiated claims, costs and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
f) reasonable and substantiated expenses to the contractor directly attributable to Owner's termination action.
Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

22. TRADE RESTRICTION
(Reference: 49 USC § 50104, 49 CFR part 30)

TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror:

a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);

b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R.; and

c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

(1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or

(2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or

(3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has knowledge that the certification is erroneous.
This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

23. VETERAN'S PREFERENCE
(Reference: 49 USC § 47112(c))

VETERAN'S PREFERENCE

In the employment of labor (excluding executive, administrative, and supervisory positions), the contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

24. TAX DELINQUENCY AND FELONY CONVICTION
(Reference: Sections 415 and 416 of Title IV, Division L of the Consolidated Appropriations Act, 2014 (Pub. L. 113-76): DOT Order 4200.6)

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

a) The applicant represents that it is (✓) not (✓) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

b) The applicant represents that it is (✓) not (✓) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies
the offense as a felony and conviction of an offense that is classified as a felony under 18

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed,
for which all judicial and administrative remedies have been exhausted, or have lapsed, and that
is not being paid in a timely manner pursuant to an agreement with the authority responsible for
collecting the tax liability.
NOTICE TO PROCEED

TO:    Knife River Corporation-Mountain West

5450 W. Gowen Road
Boise, ID 83709

DATE:________________________

PROJECT: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways B and J
FAA AIP Project No. 3-16-0003-073-2020
City Project No. F/B 20-207

Effective _______, Knife River Corporation – Mountain West, is hereby authorized to proceed on the subject project, in accordance with the Agreement dated ____________________.

The City of Boise

BY:______________________________________

Name
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE Knife River Corporation - Mountain West of the State of **Idaho** and County of **Ada**, hereinafter, known as the Principal, and **Liberty Mutual Insurance Company** as Surety, are and hereby are made bound unto the City of Boise, Idaho hereinafter known as the Owner, in the penal sum of Four Million One Hundred Three Thousand Six Hundred Eighty-Five Dollars and No Cents ($4,103,685.00) being 100% of the contract price to be paid to the Owner, for the use and benefit of all persons doing work or furnishing skill, tools, machinery or materials, or subcontracting under or for the purpose of the hereinafter named contract, for which payment, well and truly to be made, we hereby bind ourselves, our heirs, executors, administrators, successors and assignees, jointly and severally, by these presents.

* & Travelers Casualty and Surety Company of America

This obligation is, however, subject to the following conditions:

The above bound Principal has entered into a contract with the Owner under which it agrees to furnish all the labor and material and do all work necessary to construct all improvements described in these contract documents under certain terms, conditions, and stipulations and in accordance with the plans and specifications for the project, which are hereto attached and made a part of this obligation.

NOW, THEREFORE, the conditions of this obligation are such that is the above bound Principal shall faithfully and fully carry out and comply with the terms and conditions of said contract, in complete the work therein specified and in the event Contractor fails to perform, it shall be the duty of the Surety herein to assume the responsibility for the performance of the contract and to complete the work specified therein, including, but not limited to, obligations created by way of warranties and/or guarantees for workmanship and materials which warranty and/or guarantee may extend for a period of time beyond completion of said contract, and such alterations or additions as may be made therein or in the plans and specifications, and shall indemnify and save the Engineer and the Owner harmless against any claims for using any form of material process, composition or anything which is patented, and likewise indemnify and save the Engineer and the Owner harmless against all claims for damages by reason of any default or negligence, want of skill or care on the part of said Principal or Agents in and about the performance of said contract, and shall comply with all laws pertaining to said work, and shall comply with and perform any and all warranties and/or guarantees provided for in said contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

And the Surety to this bond, for value received agrees that no change, extensions of time, alterations or additions to the terms of the contract or to the work to be performed thereunder of the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alterations or additions to the terms of the Contract or the work or to the Plans and Specifications.

Said Principal and Surety hereby for themselves and their families waive and renounce the benefit of all homestead and exemption laws of this or any other state or the laws of the United States, as against any claim or judgment based upon the obligations of this bond.

It is agreed that this bond is executed pursuant to and in accordance with the provisions of the Idaho Statutes, and is intended to be and shall be construed to be a bond on compliance with the requirements thereof, except and to the extent that this bond provides Owner with greater or additional rights than those set forth in the Idaho Statutes. The payment bond required to exempt an Owner under this part shall be furnished by the Contractor in at least the amount of the original contract price before commencing the construction of the improvement under the direct contract. The bond shall be executed as surety by a surety insurer authorized to do business in this state and shall be conditioned that the Contractor shall promptly make payments for labor, services, and material to all lienors under the Contractor's direct contract. Any form of bond given by a Contractor conditioned to pay for labor, services, and material used to improve real property shall be deemed to include the condition of this subsection.
IN WITNESS WHEREOF, said Principal and Surety have thereunto affixed their hands and seals on this 16TH day of APRIL, 2020, either in person or by agents fully authorized.

As to Principal:
Signed, sealed and delivered in the presence of:

[Signature]
Witness

[Signature]
Notary Public

State of IDAHO
County of Ada

Knife River Corporation - Mountain West
Principal

By:

As to Surety:
Signed, sealed and delivered in the presence of:

[Signature]
Witness

[Signature]
Notary Public

State of Minnesota
County of Hennepin

Liberty Mutual Insurance Company &
Travelers Casualty and Surety Company of America
Surety

By:
Heather R. Goedtel, Attorney-in-Fact
(L.S.)

Approved as to form:

NICOLE CATHERINE LANGER
Notary Public
Minnesota
My Commission Expires Jan 31, 2023
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE Knife River Corporation – Mountain West of the State of Idaho and County of Ada, hereinafter, known as the Principal, and Liberty Mutual Insurance Company, a corporation chartered and existing under the laws of the State of MA & CT and duly authorized to business in the State of Idaho as Surety, are held and firmly bound unto the City of Boise, Idaho hereinafter known as the Owner, in the penal sum of Four Million One Hundred Three Thousand Six Hundred Eighty-Five Dollars and No cents ($4,103,685.00) being 100% of the contract price to be paid to the Owner, for the use and benefit of all persons doing work or furnishing skill, tools, machinery or materials, or subcontracting under or for the purpose of the hereinafter named contract, for which payment, well and truly to be made, we hereby bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

* & Travelers Casualty and Surety Company of America

This obligation is, however, subject to the following conditions:

The above bound Principal has entered into a contract with the Owner under which agrees to furnish all the labor and material and do all work necessary to construct all improvements described in these contract documents under certain terms, conditions, and stipulations and in accordance with the plans and specifications for the project, which are hereto attached and made a part of this obligation.

NOW should the above named Principal and all subcontractors, if any, to whom any portion of the work provided for in the attached contract is subject and all assignees of the said Principal and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, materials, or supplies for or in the prosecution of the work provided for in such contract, or in any amendment or extension of or addition to said contract, and for the payment of reasonable attorneys fees, incurred by the claimant or claimants in suits on said bond, then the above obligation shall be void; otherwise, to remain in full force and effect.

And the Surety to this bond, for value received agrees that no change, extensions of time, alterations or additions to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations or additions to the terms of the Contract or the work to the Plans and Specifications.

Said Principal and Surety hereby for themselves and their families waive and renounce the benefit of all homestead and exemption laws of this or any other state or the laws of the United States, as against any claim or judgment based upon the obligations of this bond.

It is agreed that this bond is executed pursuant to and in accordance with the provisions of the Idaho Statutes, and is intended to be and shall be construed to be a bond on compliance with the requirements thereof. The payment bond required to exempt an Owner under this part shall be furnished by the Contractor in at least the amount of the original contract price before commencing the construction of the improvement under the direct contract. The bond shall be executed as surety by a surety insurer authorized to do business in this state and shall be conditioned that the Contractor shall promptly make payments for labor, services, and material to all lienors under the Contractor's direct contract. Any form of bond given by a Contractor conditioned to pay for labor, services, and material used to improve real property shall be deemed to include the condition of this subsection.
IN WITNESS WHEREOF, said Principal and Surety have thereunto affixed their hands and seals on this _
6th_ day of _APRIL_, 2020, either in person or by agents fully authorized.

As to Principal:

Signed, sealed and delivered in
the presence of:

Witness

Notary Public

State of _LODIAO_

County of _ADA_

Knife River Corporation - Mountain West

Principal

By: ____________________________

(L.S.)

As to Surety:

Signed, sealed and delivered in
the presence of:

Witness

Notary Public

State of _MINNESOTA_

County of _Hennepin_

Liberty Mutual Insurance Company &
Travelers Casualty and Surety Company of America

Surety

By: ____________________________

Heather R. Goedtel, Attorney-in-Fact

(L.S.)

Approved as to form:

Owner's Attorney

CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND
MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

C-44

CONTRACT FORMS
FEBRUARY 26, 2020
ISSUED FOR BID
This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8202635-190003

POWERS OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Blake S. Bohlig, Brian D. Carpenter, Kelly Nicole Enghauser, Heather R. Goedel, Michelle Haller, Jessica Hoff, Nicole Langer, Craig Olmstead, Laurie Pfleug

all of the city of Bloomington state of Minnesota each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surely and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seats of the Companies have been affixed thereto this 21st day of November, 2019.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY

On this 21st day of November, 2019 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therewithin contained by signing on behalf of the Corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notary Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 29, 2021
Member, Pennsylvania Association of Notaries

By: Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitations as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

Any officer of the Corporation authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company’s Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company, hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 6th day of April, 2020.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: Renee C. Llewellyn, Assistant Secretary
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint Heather R. Goodiel of Minneapolis, Minnesota, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this 3rd day of February, 2017.

By:

[Signature]
Robert L. Raney, Senior Vice President

State of Connecticut
City of Hartford ss.

On this the 3rd day of February, 2017, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.

[Signature]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 6th day of April, 2020

[Signature]
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880. Please refer to the above-named Attorney-in-Fact and the details of the bond to which the power is attached.
FINAL RELEASE OF LIEN

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned, for and in consideration of the payment of the sum of _______________________, paid by the City of Boise, Idaho hereinafter referred to as "Owner", receipt of which is hereby acknowledged as total compensation for performance of the below-described Contract for Bid Schedule(s) __________, does hereby fully and completely discharge and release the Owner from and waives any and all debts, accounts, promises, damages, liens, encumbrances, causes of action, suits, bonds, judgments, claims and demands whatsoever, in law or in equity, which the undersigned ever had, now has or might hereafter have on account of labor performed, material furnished or services rendered, directly or indirectly, for the Contract between the parties dated __________, 20 _____ known as _______________ except for those claims, disputes and other matters arising out of or relating to said Contract which have been raised by written demand in accordance with the Contract Documents prior to this date and identified by the Contractor as unsettled in the final Application for Payment and are either in arbitration or court litigation, as the case may be, in accordance with the Contract Documents.

The undersigned further covenants that subcontractors, suppliers, and material suppliers, and any or all other persons supplying materials, supplies, service or labor used directly or indirectly in the prosecution of the work provided for in the Contract, have been paid in full for all work under this contract.

The undersigned agrees to maintain in full force and effect the provisions of the Contract Documents respecting the guaranty against defective work, and any other special guaranties required by the Contract Documents, for the terms provided in the Contract Documents, which terms shall begin to run from the date specified in the Contract Documents.

The undersigned represents and warrants that the statements contained in the foregoing Release are true and correct.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this ____ day of ____________, 20 _____.

WITNESSES:

______________________________________________

CONTRACTOR

______________________________________________

By: __________________________________________

______________________________________________

STATE OF ___________________________________

COUNTY OF ___________________________________

Sworn to and subscribed before me this, day of ____________, 20____.

(NOTARY SEAL)

______________________________________________

NOTARY PUBLIC

My Commission Expires: _______________________
CERTIFICATE OF LIABILITY INSURANCE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFER NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Marsh USA Inc.
333 South 7th Street, Suite 1400
Minneapolis, MN 55402-1400
Attn: MDU.ClarRequest@marsh.com
CH10220636-04M-583-GNWX-20-

INSURED
Khiro River Corporation - Mountain West
540 W. Green Road
Boise, ID 83709

CONTACT
NAME: 
PHONE (Ac. No. Ext): 
FAX (Ac. No.): 
EMAIL: 

INSURER(S) AFFORDING COVERAGE
NAIC #
INSURER A: Liberty Mutual Fire Ins Co
23035
INSURER B: N/A
N/A
INSURER C: Liberty Insurance Corporation
42604
INSURER D: 
INSURER E: 
INSURER F: 

COVERSAGES
CERTIFICATE NUMBER: CH-000970237-01
REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>LEVEL</th>
<th>TYPE OF INSURANCE</th>
<th>ADDITIONAL HED. V.P.</th>
<th>POLICY NUMBER</th>
<th>POLICY EFF. (MM/DD/YYYY)</th>
<th>POLICY EXP. (MM/DD/YYYY)</th>
<th>LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>X</td>
<td>COMMERCIAL GENERAL LIABILITY</td>
<td>CLAIMS-MADE X OCCUR</td>
<td>TB2-641-005097-040</td>
<td>01/01/2020</td>
<td>01/01/2021</td>
<td>EACH OCCURRENCE $ 2,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DAMAGE TO RENTAL PREMISES (Ex. occupants) $ 1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MED EXP (Any one person) $ 10,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PERSONAL &amp; ADV INJURY $ 2,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GENERAL AGGREGATE $ 4,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PRODUCTS - COMP &amp; AGG $ 4,000,000</td>
</tr>
<tr>
<td>A</td>
<td>X</td>
<td>AUTOMOBILE LIABILITY</td>
<td>OWNED AUTOS ONLY X SCHEDULED AUTOS</td>
<td>A2464-005097-050</td>
<td>01/01/2020</td>
<td>01/01/2021</td>
<td>COMBINED SINGLE LIMIT (Ex. accidents) $ 2,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NON-OWNED AUTOS ONLY</td>
<td></td>
<td></td>
<td></td>
<td>BODILY INJURY (Per person) $</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BODILY INJURY (Per person) $</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PROPERTY DAMAGE (Per accident) $</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EXCESS LIMIT</td>
<td>OCCUR</td>
<td>CLAIMS-MADE</td>
<td>EACH OCCURRENCE</td>
<td>AGGREGATE</td>
</tr>
</tbody>
</table>

C WORKERS COMPENSATION AND EMPLOYER’S LIABILITY

ANY PROPRIETOR PARTNER EXECUTIVE OFFICER (Member Excluded) (Mandatory in NH) if yes, describe under DESCRIPTION OF OPERATIONS below.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>LEVEL</th>
<th>TYPE OF INSURANCE</th>
<th>ADDITIONAL HED. V.P.</th>
<th>POLICY NUMBER</th>
<th>POLICY EFF. (MM/DD/YYYY)</th>
<th>POLICY EXP. (MM/DD/YYYY)</th>
<th>LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>N/A</td>
<td>WORKERS COMPENSATION AND EMPLOYER’S LIABILITY</td>
<td>N/A</td>
<td>WA7-640-005007-010 (AOS)</td>
<td>01/01/2020</td>
<td>01/01/2021</td>
<td>X PER STATUTE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WA7-640-026007-020 (Regulated)</td>
<td>01/01/2020</td>
<td>01/01/2021</td>
<td>EL. EACH ACCIDENT $ 1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;INCLUDES &quot;STOP GAP&quot;&quot;</td>
<td></td>
<td></td>
<td>EL. DISEASE - POLICY LIMIT $ 1,000,000</td>
</tr>
</tbody>
</table>

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 191, Additional Remarks Schedule, may be attached if more space is required)

City of Boise, Boise Airport, & Reynolds, Smith and Hills later included as additional insured under general liability per the attached CG 2010 and CG 2037 endorsements and does not include professional liability coverage. Blanket Additional Insured for Automobile Liability is included per attached designated insured endorsement CA 20-48.

CERTIFICATE HOLDER
City of Boise
Attn: Contract Administration
P.O. Box 500
Boise, ID 83701

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Manasi Mukherjee

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ACORD 25 (2016/03) The ACORD name and logo are registered marks of ACORD
THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED FOR COVERED AUTOS LIABILITY COVERAGE

This endorsement modifies insurance provided under the following:

- AUTO DEALERS COVERAGE FORM
- BUSINESS AUTO COVERAGE FORM
- MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement identifies person(s) or organization(s) who are "insured(s)" for Covered Autos Liability Coverage under the Who is An Insured provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

<table>
<thead>
<tr>
<th>SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name Of Person(s) Or Organization(s):</strong></td>
</tr>
<tr>
<td>Any person or organization whom you have agreed in writing to add as an additional insured, but only to coverage and minimum limits of insurance required by the written agreement, and in no event to exceed either the scope of coverage or the limits of insurance provided in this policy.</td>
</tr>
<tr>
<td>This policy will be primary and non-contributory to any like insurance available to the person or organization noted above.</td>
</tr>
</tbody>
</table>

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Each person or organization shown in the Schedule is an "insured" for Covered Autos Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who is An Insured provision contained in Paragraph A.1. of Section II - Covered Autos Liability Coverage in the Business Auto and Motor Carrier Coverage Forms and Paragraph D.2. of Section I - Covered Autos Coverages of the Auto Dealers Coverage Form.
Policy Number: AI2-641-005097-050
Issued By: Liberty Mutual Fire Insurance Co.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO THIRD PARTIES

This endorsement modifies insurance provided under the following:

- BUSINESS AUTO COVERAGE PART
- MOTOR CARRIER COVERAGE PART
- GARAGE COVERAGE PART
- TRUCKERS COVERAGE PART
- EXCESS AUTOMOBILE LIABILITY INDEMNITY COVERAGE PART
- SELF-INSURED TRUCKER EXCESS LIABILITY COVERAGE PART
- COMMERCIAL GENERAL LIABILITY COVERAGE PART
- EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE PART
- PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
- LIQUOR LIABILITY COVERAGE PART

<table>
<thead>
<tr>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Other Person(s)/Organization(s):</td>
</tr>
<tr>
<td>Per schedule of certificate holders on file with the Company</td>
</tr>
</tbody>
</table>

A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule above. We will send notice to the email or mailing address listed above at least 10 days, or the number of days listed above, if any, before the cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.

B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.
THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:
   1. Your acts or omissions; or
   2. The acts or omissions of those acting on your behalf;

   in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and

2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or

   2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

SCHEDULE
SCHEDULE (continued)

<table>
<thead>
<tr>
<th>Name Of Additional Insured Person(s)</th>
<th>Location(s) Of Covered Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any person or organization with whom you have agreed in writing in a contract or agreement, prior to an &quot;occurrence&quot; or &quot;offense&quot;, that such person or organization be added as an additional insured on your policy; and 2. Any other person or organization you are required to add as an additional insured under the contract or agreement described in item (1) above.</td>
<td>All locations as required by a written contract or agreement entered into prior to an &quot;occurrence&quot; or offense.</td>
</tr>
</tbody>
</table>

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.
4.B.1.a

Packet Pg. 76

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations; whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

SCHEDULE

Name Of Additional Insured Person(s)
Or Organization(s):

Any person or organization for whom you have agreed in writing in a contract or agreement, prior to an "occurrence" or "offense", that such person or organization be added as an additional insured on your policy, and 2. Any other person or organization you are required to add as an additional insured under the contract or agreement described in item (1) above.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Location And Description Of Completed Operations

All locations as required by a written contract or agreement entered into prior to an "occurrence" or offense.
Policy Number  TB2-641-005097-040
Issued by  LIBERTY MUTUAL FIRE INSURANCE COMPANY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO THIRD PARTIES

This endorsement modifies insurance provided under the following:

- BUSINESS AUTO COVERAGE PART
- MOTOR CARRIER COVERAGE PART
- GARAGE COVERAGE PART
- TRUCKERS COVERAGE PART
- EXCESS AUTOMOBILE LIABILITY INDEMNITY COVERAGE PART
- SELF-INSURED TRUCKER EXCESS LIABILITY COVERAGE PART
- COMMERCIAL GENERAL LIABILITY COVERAGE PART
- EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE PART
- PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
- LIQUOR LIABILITY COVERAGE PART
- COMMERCIAL LIABILITY - UMBRELLA COVERAGE FORM

<table>
<thead>
<tr>
<th>Name of Other Person(s) / Organization(s):</th>
<th>Email Address or mailing address:</th>
<th>Number Days Notice:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Schedule of certificate holders on file with the Company</td>
<td></td>
<td>90</td>
</tr>
</tbody>
</table>

A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule above. We will send notice to the email or mailing address listed above at least 10 days, or the number of days listed above, if any, before the cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.

B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.
NOTICE OF CANCELLATION TO THIRD PARTIES

A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule below. We will send notice to the email or mailing address listed below at least 10 days, or the number of days listed below, if any, before cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.

B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

Schedule

<table>
<thead>
<tr>
<th>Name of Other Person(s) / Organization(s):</th>
<th>Email Address or mailing address:</th>
<th>Number Days Notice:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule on file with the company</td>
<td>Schedule on file with the company</td>
<td>90</td>
</tr>
</tbody>
</table>

All other terms and conditions of this policy remain unchanged.

Issued by Liberty Insurance Corporation 21814

For attachment to Policy No. WA7-64D-005097-010 Effective Date 01/01/2020 Premium 5

Issued to Centennial Energy Holdings, Inc.

WC 99 20 75 © 2018 Liberty Mutual Insurance
NOTICE OF CANCELLATION TO THIRD PARTIES

A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule below. We will send notice to the email or mailing address listed below at least 10 days, or the number of days listed below, if any, before cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.

B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

Schedule

<table>
<thead>
<tr>
<th>Name of Other Person(s) / Organization(s):</th>
<th>Email Address or mailing address:</th>
<th>Number Days Notice:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule on file with the company</td>
<td>Schedule on file with the company</td>
<td>90</td>
</tr>
</tbody>
</table>

All other terms and conditions of this policy remain unchanged.

Issued by Liberty Insurance Corporation 21814

For attachment to Policy No. WA7-64D-005097-020 Effective Date 01/01/20 Premium $

Issued to MDU Resources Group, Inc.

© 2016 Liberty Mutual Insurance
EVIDENCE OF PROPERTY INSURANCE

THIS EVIDENCE OF PROPERTY INSURANCE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFER NO RIGHTS UPON THE ADDITIONAL INTEREST NAMED BELOW. THIS EVIDENCE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS EVIDENCE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE ADDITIONAL INTEREST.

AGENCY
Marsh USA Inc.
333 South 7th Street, Suite 1400
Minneapolis, MN 55402-2403

PHONE (INC. NO. EXT.):

FAX (INC. NO.):

E-MAIL:

ADDRESS:

CODE:

SUB CODE:

AGENCY ID #:

INSURED
Kole River Corporation - Mountain West
5450 W. Gowen Road
Boise, ID 83709

COMPANY
Zurich American Insurance Co

POLICY NUMBER
CPP3704506-18

LOAN NUMBER

EFFECTIVE DATE
01/01/2020

EXPIRATION DATE
01/01/2021

CONTINUED UNTIL TERMINATED IF CHECKED

PROPERTY INFORMATION

LOCATION/DESCRIPTION
Re: Realignment of Taxiway H and Mill Overlay Portions of Taxiways J and B, Contract No. FB 20-207, Contract Amount $4,103,685.00

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS EVIDENCE OF PROPERTY INSURANCE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

COVERAGE INFORMATION

PERILS INSURED
"All Risk" Blanket Real and Personal Property including
Boiler Machinery, earthquake, food and wind perils.
Leased/Rented Contractor's Equipment ($2,500,000 per item, $5,000,000 per occurrence)
Builder's Risk/Installation (See Attached)

BASIC

BROAD

SPECIAL

AMOUNT OF INSURANCE
25,000,000
5,000,000
25,000,000
26,000,000

DEDUCTIBLE
25,000
25,000
25,000
25,000

REMARKS (Including Special Conditions)

City of Boise, Boise Airport, & Reynolds, Smith and Hills are included as additional insured where required by written contract.

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

ADDITIONAL INTEREST

CHI-009476641-01

X ADDITIONAL INSURED
LENDER'S LOSS PAYABLE
LOSS PAYEE
MORTGAGEE

LOAN #

AUTHORIZED REPRESENTATIVE
of Marsh USA Inc.

Manasi Mukherjee

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ADDITIONAL REMARKS SCHEDULE

AGENCY
Marsh USA Inc.

NAMED INSURED
Koelle River Corporation - Mountain West
5450 W. Gowen Road
Boise, ID 83706

POLICY NUMBER

CARRIER

EFFECTIVE DATE:

NAIC CODE

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 27 FORM TITLE: Evidence of Property Insurance

BUILDERS RISK COVERAGE DURING COURSE OF CONSTRUCTION SUBJECT TO POLICY TERMS AND CONDITIONS.

Any one Building, Structure or Project – $25,000,000 Limit (Deductible $25,000)
Transmission and Distribution Lines Work – $25,000,000 (Deductible $25,000)
Paving, Decking of Bridges – $25,000,000 Limit (Deductible $25,000)
Sewer/Water or Plumbing – $25,000,000 Limit (Deductible $25,000)
Flood - $25,000,000 Limit per Occurrence and Annual Aggregate (Subject to a minimum $25,000 deductible)
Earth Movement - $25,000,000 Limit per Occurrence and Annual Aggregate (Subject to a minimum $25,000 deductible)
Earth movement in Zones 1 and 2 are subject to a per Occurrence and Annual Aggregate limit of - $15,000,000 (Subject to a minimum $25,000 deductible)

Other deductibles may apply as per policy terms and conditions.

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PROPOSAL
CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS

SCHEDULE I (FEDERAL) - REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J AND B

SCHEDULE II (NON-FEDERAL) - UPS K-LOADER PADS

FAA AIP PROJECT NO. 3-16-0003-073-2020
BOISE CITY PROJECT NO. F/B 20-207
RS&H PROJECT NO.: 225-0005-022

FEBRUARY 26, 2020
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BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J & B

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CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND
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INVITATION TO BID

PROJECT NAME: FAA AIP PROJECT NO. 3-16-0003-073-2020, City Project Number F/B 20-207,
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J AND B

BID DATE: MARCH 25, 2020 at 11:00 AM Local Time

Sealed bids will be received by the City of Boise at the Purchasing Office 1st Floor at Boise City Hall,
150 North Capitol Boulevard, Boise, Idaho 83702, before 11:00 AM (local time), on the bid date, at
which time all bids will be publicly opened and read aloud. Schedule I (Federal) project work includes:
Reconstruct Taxiway H to be perpendicular with Runway 10R-28L and mill and overlay Taxiways J and B.
Schedule II (Non-Federal) project work includes: Fill infield areas along Taxiway H with crushed
aggregate and construct two (2) 72 square yard Portland Cement concrete pads at the UPS West Ramp.

Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

PLANS AVAILABILITY: Plans and Specifications will be available for review beginning on February 26,
2020 at the following locations: City of Boise Purchasing Office, 150 North Capitol Boulevard, Boise,
Idaho 83705, or through DemandStar (link provided on City Website) www.cityofboise.org.

The Bidder must supply all information required by the proposal forms and specifications, and must bid on
all items and schedules presented. Bids must be completed and signed in space(s) provided on the
enclosed blank bid forms or the bid will be subject to rejection. The Owner City of Boise reserves the right
to reject any and all proposals, to waive technicalities and/or irregularities as provided in Section 20-08 of
the General Provisions, and to accept the proposal(s) that are in the best interest of the City. No Bidder
may withdraw his bid within forty-five (45) calendar days after the actual date of the bid opening. It
is intended that the project will be completed during the 2020 construction season.

A cashier’s check, a certified check, cash or a surety bond in the amount of five percent (5%) of the bid
shall accompany the proposal of each bidder. The said check or bond shall be submitted as security that
should the bidder be awarded the work, he will enter into a contract and furnish the necessary bonds and
insurance certificates within ten (10) days from the date of notice of award and failing to do so, said bid
security shall be forfeited to the Owner (the City of Boise, Idaho) as liquidated damages. The check or
bond shall be made payable to the Owner. The Owner reserves the right to hold the check or bond of the
two lowest bidders until the successful bidder has entered into a contract and furnished the necessary
bonds. All other checks or bonds will be returned upon request as soon as the award has been made to
the successful bidder.

Each Bidder is individually responsible for the careful examination of the site of the proposed Work, the
Proposal, Plans, General Provisions, Special Conditions, Technical and Supplemental Specifications,
Contract Forms and all requirements of the project. The failure or omission by any Bidder to do so shall in
no way relieve any Bidder from any obligation with respect to its bid.

PRE-BID CONFERENCE: A Pre-Bid Conference for this project will be held on March 10, 2020 at 2:00
PM (local time) at the Boise Airport, 3201 Airport Way, Boise, Idaho 83705, 3rd Floor, Boise River
Conference Room. Access to the site is restricted, therefore, this pre-bid conference is recommended to
be attended by all prospective bidders.

AFFIRMATIVE ACTION: The proposed Contract is under and subject to Executive Order 11246 of
September 24, 1965, and the Equal Opportunity Clause. The bidder’s (proposer’s) attention is called to the
Contract Specifications" set forth in the specifications, including the goals and timetables for minority and
female participation.
CERTIFICATION OF NONSEGREGATED FACILITIES: SS

Notice to Prospective Federally Assisted Construction Contractors and Subcontractors:

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a federally-assisted construction contract or subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

2. Contractors or subcontractors receiving federally-assisted construction contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause. NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

The successful Bidder will be required to submit a Certification of Nonsegregated Facilities prior to award of the Contract, and to notify prospective Subcontractors of the requirement for such Certification where the Subcontract exceeds $10,000. Samples of the Certification and Notice to Subcontractors appear in the Specifications.

BUY AMERICAN PREFERENCES:

(a) The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program. The following terms apply:

1. Steel and manufactured products. As used in this clause, steel and manufactured products include (1) steel produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs b. (1) or (2) shall be treated as domestic.

2. Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.

3. Cost of Components. This means the costs for production of the components, exclusive of final assembly labor costs.

(b) The successful bidder will be required to assure that only domestic steel and manufactured products will be used by the Contractor, subcontractors, materialmen and suppliers in the performance of this contract, except those:

1. that the US Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality;

2. that the US Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or

3. that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.

FOREIGN TRADE RESTRICTIONS:

(a) Definitions. The definitions pertaining to this clause are those that are set forth in 49 CFR 30.7–30.9
(b) General. This clause implements the procurement provisions contained in the Continuing Resolution on the Fiscal Year 1988 Budget, Public Law No. 100–202, and the Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law No. 100–223.

(c) Restrictions. The Contractor shall not knowingly enter into any subcontract under this contract:

1. With a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the United States Trade Representative (U.S.T.R.); or

2. for the supply of any product for use on the Federal Public works project under this contract that is produced or manufactured in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

WAGE RATES: Minimum Davis-Bacon wage rates as established by the Secretary of Labor are applicable to this project.

DISADVANTAGED BUSINESS ENTERPRISE

This contract will be funded in part by a grant from the Federal Aviation Administration. In accordance with federal requirements, the City of Boise has determined that this contract has Disadvantaged Business Enterprises subcontracting possibilities. Contact City of Boise for the DBE policy for the City of Boise. Refer to IB-14 for other DBE information.

FEDERAL FUNDING

This project is funded in part with FEDERAL FUNDING and is subject to Federal Contract Provisions.

IDAHO PUBLIC WORKS LICENSE

Contractors, subcontractors, and specialty contractors shall be licensed at time of contract signing as Public Works Contractors in accordance with the Idaho Public Works License Act 54-1902. This Public Works project is financed in part by Federal Aid Funds. No Contractor or subcontractor shall be required to have a current license as a Public Works Contractor in the State of Idaho in order to submit a bid or Proposal on this project; however, prior to award and execution of the contract and within approximately two (2) weeks after bid opening, the successful bidder shall secure a Public Works Contractors License.

CIVIL RIGHTS TITLE VI ASSURANCES

The City of Boise, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Any questions regarding bids are to be directed to:

Missy Grothaus
Boise City Purchasing
Fax: (208) 384-3995
MGrothaus@cityofboise.org

Advertise on: February 26, 2020
CITY OF BOISE
INSTRUCTIONS TO BIDDERS

I. GENERAL

A. This project is to be financed in part by a grant from the United States under the Airport Improvement Program. Award of contract is subject to the concurrence of the Federal Aviation Administration (FAA) and approval by the City of Boise (hereinafter called “Owner”).

B. Compliance with Law

1. The Bidder covenants and agrees that he and his agents and employees will comply with all municipal, state and federal laws, applicable national and local codes, Owner rules and regulations applicable to the work to be conducted under this Agreement and that he shall obtain all necessary permits, pay all required fees and taxes, and otherwise perform these services in a legal manner. Owner rules and regulations are available on request. The Bidder is assumed to be familiar with all federal, state and local laws, ordinances, Owner rules and regulations that in any manner affect the work. Ignorance on the part of the Bidder will in no way relieve him from responsibility.

2. Bidder certifies that all material, equipment, etc., contained in his proposal meets all OSHA, FAA, ITD and Owner requirements.

C. General Bond Requirements:

1. The Proposal Guaranty shall be as specified; only the Proposal Bond and Surety’s Bond Affidavit as bound within these documents or a Cashier’s Check is acceptable. Each separate proposal shall be accompanied by a Cashier’s Check, cash or Proposal Bond on the form provided herein in the amount of 5 percent (5%) of the total amount bid, made payable to the City of Boise. If a Proposal Bond is provided in lieu of a Cashier’s Check, it must be accompanied by a valid Power of Attorney indicating that the person signing the bond on behalf of the Surety has full legal authority to do so.

2. The amount of such bond, cash or the check of the Bidder whose proposal is accepted shall be forfeited and paid to the Owner as liquidated damages if said Bidder fails to enter into a Contract with the Owner and to furnish the required executed Contracts, Certificates of Insurance and Performance (100%) and Payment (100%) Bonds within ten (10) calendar days after the date of the Notice of Award and Acceptance of the Proposal.

3. Contract Payment and Performance Bonds shall be as specified; only the Payment and Performance Bonds and Surety’s Bond Affidavit as bound within these Contract Documents are acceptable.

D. Insurance Requirements:

1. Insurance requirements shall be as specified in the Special Conditions, Section 2.

E. Contract Documents:

The Contract Documents under which it is proposed to execute this work consist of all material bound here, plus any addenda incorporated into the documents. These Contract Documents are intended to be mutually cooperative and to provide all details reasonably required for the execution of the proposed work. Any person contemplating the submission of a proposal shall have thoroughly examined all of the various parts of these documents, and should there be any doubt as to the meaning or intent of said Contract Documents, the Bidder should request of the Engineer, in writing (at least six (6) calendar days prior to bid opening), an interpretation thereof. Any interpretation or change in said Contract Documents will be made only in writing, in the form of addenda to the documents and will be furnished to all Bidders receiving a set of the documents, who shall indicate receipt of same in the space provided on the proposal form. The Owner will not be responsible for any other explanation or interpretation of said documents.
F. Bid Costs:

The Bidder will be responsible for all costs (including site visits where needed) incurred in preparing or responding to this Formal Bid. All materials and documents submitted in response to the Formal Bid become the property of the City and will not be returned.

G. Public Records/Confidential Information:

The Idaho Public Records Act, Title 74, Chapter 1, Idaho Code, allows the open inspection and copying of public records. Public records include any writing containing information relating to the conduct or administration of the public's business prepared, owned, used, or retained by a State or local agency regardless of the physical form or character. All, or most, of the information contained in your Bid or Proposal will be a public record subject to disclosure under the Public Records Act and will be available for inspection and copying by any person. The Public Records Act contains certain exemptions. One exemption potentially applicable to part of your response may be for trade secrets. Trade secrets include a formula, pattern, compilation, program, computer program, device, method, technique or process that derives economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by other persons and is subject to the efforts that are reasonable under the circumstances to maintain its secrecy.

If you consider any element of your Bid or Proposal to be a trade secret, or otherwise protected from disclosure, you must:
   a. Indicate by marking each page of the pertinent document confidential; and,
   b. Include the specific basis for your position that it be treated as exempt from disclosure.

Prices quoted in your Bid or Proposal are not a trade secret.

The following is not acceptable or in accordance with the Public Records Act and will not be honored:
   a. Marking your entire Bid or Proposal as exempt; or,
   b. Placing a statement or legend on one (1) page stating that all or substantially all of the response is exempt.

The City, to the extent allowed by law and in accordance with these Instructions, will honor a designation of nondisclosure. If you claim material to be exempt from disclosure under the Idaho Public Records Act, the Bidder/Proposer will expressly agree to defend, indemnify and hold harmless the City from any claim or suit arising from the City’s refusal to disclose any such material. Any questions regarding the applicability of the Public Records Act should be addressed to your own legal counsel – Prior to submission.

H. Lowest Responsive Bidder:

In determining the lowest responsive bid, Purchasing will consider all acceptable bids on a basis of compliance with applicable laws, statutes, and codes, and consistent with bidding and specification requirements, the price to be paid after deduction of any discount specified, for the bid schedules being awarded. The City will also consider whether the vendor is a responsible bidder as described in the City of Boise Business Operations Manual.

II. NONDISCRIMINATION AND SEGREGATED FACILITIES

A. Each Bidder shall complete, sign and include in his/her Proposal the Equal Employment Opportunity Report Statement and Certification of Nonsegregated Facilities. A Proposal may be considered nonresponsive and may be rejected if it fails to furnish required data. When a determination has been made to award a Contract to a specific Contractor, such Contractor shall, prior to award, furnish such other pertinent information regarding his/her own employment policies and practices as the Federal Aviation Administration (FAA), the ITD, the Owner, or the Secretary of Labor may require. Contractor shall require similar compliance with its subcontractors. Where the Contract Price is $10,000.00 or greater, Contractor shall comply with Part 152 of the Federal Aviation Regulations (FAR) as amended and specifically FAR
152.411 (c) and (d), incorporated herein by this reference. All such information required of a subcontractor shall be furnished by the Bidder.

**B. The Equal Employment Opportunity Report Statement, Certification of Nonsegregated Facilities, Equal Opportunity Clause, and all other EEO requirement shall be included in all nonexempt subcontracts entered into by the Bidder. Subcontracts entered into by Bidder shall also include all other applicable labor provisions. No subcontract shall be awarded to a noncomplying subcontractor.**

**C. Affirmative Action:** If the Contract is an aviation-related activity as defined in 14 CFR Part 152, and is a Construction Contract of $10,000.00 or more, Contractor assures that it will undertake an Affirmative Action Program as required by 14 CFR Part 152, Subpart E, to ensure that no person shall, on the grounds of race, creed, color, national origin, or sex, be excluded from participating in or receiving the services or benefits of any program or activity covered by this subpart. Bidder assures that it will require that it’s covered sub organizations provide assurances to the Bidder that they similarly will undertake Affirmative Action Programs and that they will require assurances from their sub organizations, as required by 14 CFR Part 152, Subpart E to the same effect.

**D. Bidders must comply with the President’s Executive Order No. 11246, which prohibits discrimination in employment regarding race, creed, color, sex or national origin.**

**E. In addition, the Bidder will also insert in each of his subcontracts a clause requiring the subcontractor to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.**

### III. EXAMINATION OF CONDITIONS AFFECTING WORK

**A. Prior to submitting a proposal, each Bidder shall examine and thoroughly familiarize himself with all existing conditions, including all applicable laws, codes, ordinances, rules and regulations that will affect his work. It is recommended that Bidders visit the project site during the pre-bid conference, examine the grounds and all existing buildings, utilities, pavements and systems and shall ascertain all conditions that will in any manner affect work. Bidders shall ask the Architect/Engineer, in writing, for any additional information deemed necessary for them to be fully informed as to exactly what is to be expected seven (7) calendar days prior to bid.**

### IV. REQUEST FOR CLARIFICATION, PROTEST OF BID REQUIREMENTS, STANDARDS, SPECIFICATIONS, OR PROCESS

Any Bidder who wishes to request clarifications, or protest the requirements, standards, specifications or processes outlined in this Request for Bid/Proposal may submit a written notification to the Purchasing Office to be received no later than:

<table>
<thead>
<tr>
<th>Item</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions and Clarifications due:</td>
<td>March 18, 2020 by close of business</td>
</tr>
<tr>
<td>Bid/Proposal Specification Protest request to be submitted no later than three (3) working days prior to bid/proposal opening date</td>
<td>Request that protest be submitted no later than three (3) working days prior to bid/proposal opening date, noon local Time</td>
</tr>
</tbody>
</table>

The notification will state the exact nature of the clarification, protest, describing the location of the protested portion or clause in the Bid/Proposal document and explaining why the provision should be struck, added, or altered, and contain suggested corrections. The Purchasing Office may deny the protest, modify the Bid/Proposal, and/or reject all or part of the protest. Changes to these specifications will be made by written addendum. Verbal responses will not be binding on the City or the Bidder.
Written requests are to be directed to:

<table>
<thead>
<tr>
<th>Missy Grothaus</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Boise Purchasing</td>
</tr>
<tr>
<td>150 N. Capitol Blvd</td>
</tr>
<tr>
<td>Boise ID 83702</td>
</tr>
<tr>
<td>Fax: 208-384-3995</td>
</tr>
<tr>
<td><a href="mailto:MGrothaus@cityofboise.org">MGrothaus@cityofboise.org</a></td>
</tr>
</tbody>
</table>

V. ADDENDA TO THE Formal Bid

A. Modifications to the BID by Purchasing Office will be on DemandStar. Verbal modifications are not binding on the City or the Bidder. Bidders are requested to acknowledge each addendum received on the Bid Form. Bidders are required to comply with all addenda issued by the City whether received, acknowledged, or not acknowledged. Bidders not complying will be disqualified. All addenda will be issued by Boise City Purchasing. No addenda will be issued later than five (5) calendar days prior to the Bid Opening date.

VI. SUBSTITUTIONS

A. The materials, products and equipment described in the Contract Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. The Bidder is responsible for assuring that all supplies, subcontractors, and vendors conform to the Contract requirements.

B. No substitution will be considered prior to receipt of bids unless written request for approval has been submitted in the proper format not less than seven (7) calendar days prior to the receipt of bids. The burden of proof of the merit of the proposed substitution is upon the Bidder. The Architect/Engineer's decision of approval or disapproval of a proposed substitution is final.

In making requests for substitutions, the Bidder shall list the particular system, product, or material he wishes to substitute, and the justification for such a request. Requests submitted shall include any and all adjustments of that any other work affected thereby.

C. If the Architect/Engineer approves any proposed substitution prior to receipt of bids, such approval will be set forth in an Addenda. Bidders shall not rely on approvals made in any other manner.

D. No substitutions will be considered after the receipt of bids except as specifically provided for in the Contract Documents.

VII. PREPARATION AND SUBMISSION OF PROPOSAL

A. Sealed Proposals for the construction of the Project generally described will be received until the time and date stated in the "Invitation to Bid."

B. The Proposal shall be on the "Proposal Forms" provided; no other forms are acceptable.

C. Due to the allocation of funds, successful Bidders will be required to provide verified breakdown of costs of Work in a manner acceptable to the Engineer and Owner.

D. Sealed bids will be received by the City of Boise at the Purchasing Office at Boise City Hall, 150 North Capitol Boulevard, Boise, Idaho 83702, 11:00 AM (local time), on the bid date, at which time and place all bids will be publicly opened and read aloud. Bids must be in the possession of the City of Boise at the Purchasing Office at Boise City Hall prior to bid call at 11.00 AM on the bid date.
The bid, with original signatures is to be submitted in a sealed envelope and the sealed envelope marked as follows:

Bid of (Bidder's name, address and telephone number)
For Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B
F/B 20-207 to be opened
March 25, 2020, 11:00 AM, City of Boise at the Purchasing Office at Boise City Hall

ANY BID RECEIVED AFTER THE SPECIFIED TIME WILL NOT BE CONSIDERED AND WILL BE RETURNED UNOPENED.

Bids must be completed and signed in space(s) provided on the enclosed blank bid form(s) or bid will be subject to rejection. When sent by mail, preferably registered, the sealed Proposal, marked as indicated above, shall be enclosed in an additional envelope and sent by registered mail with return receipt requested. The Owner will in no way be responsible for delays caused by the U.S. Postal service or any other deliverer of the Proposal, or for delay received on or before the time and at the place designated above. Proposals received after the specified opening time shall be returned to the Bidder unopened.

**BIDDER’S CHECKLIST**

This Bidder’s Checklist is offered to the prospective bidder as a means of checking his/her bid proposal in order to insure that a complete bid is submitted, free from omissions and errors that could possibly lead to rejection of the Bid. The bidder must return all “Yellow” pages of Bid Documents as part of his/her Bid Proposal, along with one additional copy. Failure to fill out the required information in each form of the Bid Proposal and to include in the bid package delivered prior to bid opening will constitute a non-responsive bid. Check when completed:

1. Are all blank spaces filled out on Bid Proposal Form? Is a complete set of Bid Proposal documents intact?
2. Are bid amounts shown correctly as well as extensions and totals? Recheck for errors or omissions? Both lump sum and alternate sum prices must be shown in words and figures.
3. Has the Bidder indicated on the Bid Proposal Form if their bid complies with the specifications by indicating "yes/no"?
4. Have questions arising from the bidding, contract, specifications or plans been submitted to the proper authority and resolved in the proper manner?
5. Are authorized signatures properly affixed to the bidding documents?
6. Have the required Bid Submittal forms been reviewed and complied with?
7. Have all Addenda been received and acknowledged with proper signature on the Bid Proposal?
8. Has a certified check, cash, or a Bid Bond in the amount specified been included with the contract documents?
9. In order for a bid to be considered, all bidding documents and the Bid Bond must be placed in a properly addressed, sealed envelope and delivered to the specified authority prior to the time designated for the bid opening.
10. Have original and a copy of Bid Proposal been submitted?
11. Complete and submit the following attachments, (printed within the bid section in this specification) with the Bid Proposal:

Proposal:
- Bid Proposal Form including Bid Schedule
- Proposal Affidavit
- Proposal Bond, Surety Bond Affidavit including Power of Attorney
- Required Equal Opportunity Statements
INSTRUCTIONS TO BIDDERS

BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND MIL/OVERLAY OF PORTIONS OF TAXIWAYS J & B

E. The Bidder must submit his Proposal on the forms furnished by the Owner. All blank spaces in the Proposal forms must be correctly filled in where indicated and the Bidder must state the price(s) (written in ink) both in words and numerals. The words, unless obviously incorrect, will govern.

F. Proposals shall be submitted as indicated in the “Proposal Form” and should be signed by an official of the firm submitting the Proposal.

G. Erasures or other changes in a Proposal should be explained or noted over the initials or signature of the Bidder.

H. Proposals containing reservations, conditions, omissions, unexplained erasures or alterations, items not required in the bid or irregularities of any kind may be rejected by the Owner.

I. Each proposal shall indicate the full legal business name and address of the Bidder and shall be signed by him/her with his/her usual signature.

J. A proposal submitted by a partnership shall list the names of all partners and shall be signed in the partnership name by one of the members of the partnership.

K. A proposal submitted by a corporation shall be executed in the legal name of the corporation and signed by the President or Vice President. The name of each person signing the Proposal shall be typed or printed below the signature.

L. When requested by the Owner, a Power of Attorney or other satisfactory evidence of the authority of the officer signing in behalf of the corporation shall be furnished for the Owner’s records.

M. The Bidder must supply all information required.

N. The Proposal must be accompanied by a Proposal Bond and Surety’s Bond Affidavit executed on the forms provided, cash or a Cashier’s Check payable to the Owner in an amount equal to not less than five percent (5%) of the bid. If a Bidder withdraws its Proposal within 90 days from the date on which bids are opened, or if a Bidder is awarded the Contract but fails, refuses or neglects to execute the Contract or to furnish acceptable and required Certificates of Insurance, and Payment and Performance Bonds within ten (10) days after receipt of written Notice of Award and Acceptance, then the amount of this Bond or check shall be paid to, or retained by the Owner as liquidated damages.

O. Proposals which are electronically transmitted will not be accepted.

VIII. TAX EXEMPT CERTIFICATE

A. If the Bidder desires a tax-exempt certificate, it shall be obtained from the State of Idaho and not through the Owner.
IX. SURETY BONDS

A. With the execution and delivery of the Contract, the Bidder shall furnish and file with the Owner in the amounts herein required the following surety bonds:

B. Performance Bond, Payment Bond, and Labor and Materials Payment Bond, each at 100 percent of the proposal contract amount, as security for the faithful performance of the Contract and for the payment of all persons, firms or corporations to whom the Bidder may become legally indebted for labor, materials, tools, equipment or services of any nature including utility and transportation services, employed or used by him in performing the work.

The one (1) year warranty shall begin on the date of official acceptance of the completed installation by resolution of the Owner.

No surety will be accepted who is now in default or delinquent on any bond or who is interested in any litigation or arbitration claim against the Owner. All bonds shall be made on forms furnished herein and shall be executed by surety companies licensed to do business in the State of Idaho and acceptable to the Owner. Each bond shall be executed by the Bidder and the surety and the bonds shall bear the same date as, or a date subsequent to that of the Contract.

Should any surety on the Contract be determined unsatisfactory at any time by the Owner, notice will be given to the Bidder to that affect and the Bidder shall forthwith substitute a new surety or sureties satisfactory to the Owner. No payment will be made under the Contract until the new surety or sureties, as required, have qualified and been accepted by the Owner. The Contract shall not be operative nor shall any payments be due until approval of the bond has been made by the Owner.

X. INSURANCE

Contractor’s Liability Insurance Requirements. The Bidder shall provide prior to award a listing of general liability, automobile liability, and worker's compensation.

XI. SPECIAL INSTRUCTIONS TO BIDDERS REGARDING EEO

A. Notice of Requirement for Affirmative Action (41 CFR Part 60-4.2 and Executive Order 11246, as amended)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

TIMETABLES: Until further notice.

<table>
<thead>
<tr>
<th>Goals of minority participation in each trade</th>
<th>Goals for female participation in each trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3%</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

These goals are applicable to all the contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the executive order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific
affirmative action obligations required by the specifications set forth in 41 CFR Part 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project, for the sole purpose of meeting the contractor’s goals, shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director, OFCCP, within 10 business days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and, the geographical area in which the contract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is Boise City, Idaho.

B. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (41 CFR 60-4.3)

1. As used in these specifications:
   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
   b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
   c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
   d. "Minority" includes:
      (1) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
      (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
      (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

   c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.

   d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.
f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables,
and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

C. NONSEGREGATED FACILITIES

1. CERTIFICATION OF NONSEGREGATED FACILITIES
The federally assisted construction contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that she or he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally assisted construction contractor certifies that she or he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.
As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, sex, or national origin, because of habit, local custom, or any other reason. The federally assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause, and that she or he will retain such certifications in his files.

2. NOTICE TO PROSPECTIVE FEDERALLY ASSISTED CONSTRUCTION CONTRACTORS (41 CFR Part 60-1.8)
   a. A Certification of Nonsegregated Facilities must be submitted prior to the award of a federally assisted construction contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.
   b. Contractors receiving federally assisted construction contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

3. NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATION OF NONSEGREGATED FACILITIES
   a. A Certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.
   b. Contractors receiving subcontract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

D. DBE REQUIRED STATEMENTS – 49 CFR PART 26 (11/19/01)

1. Contractor Responsibilities: The Contractor shall agree to the below stated policy and Disadvantaged Business Enterprises Obligation and further agrees to insert the following clauses (a, b, and c) in any subcontracts.
   a. Policy: It is the policy of the Department of Transportation (DOT) that Disadvantaged Business Enterprises (DBE’s) as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement. Consequently, the DBE requirements of 49 CFR Part 26, apply to this agreement.
   b. Contract Assurance (§26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the City of Boise deems appropriate.
   c. Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from City of Boise. The prime contractor agrees further to return retainage payments to each subcontractor within 60 days after the subcontractor’s work is satisfactorily completed. Any delay or postponement of payment from the above referenced time

frame may occur only for good cause following written approval of the City of Boise. This clause applies to both DBE and non-DBE subcontractors.

2. Goals. While a DBE goal has not been established for this project, DBE participation is encouraged. City of Boise is required to track and report DBE participation to the FAA and therefore, the contractor will be required to report information for any DBE firms participating in this project.
   a. The names, addresses of DBE firms that will participate in the contract;
   b. A description of work that each DBE will perform;
   c. The dollar amount of the participation of each DBE firm;
   d. Written and signed document of commitment to use the DBE subcontractor whose participation it submits to meet a contract goal;
   e. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor’s commitment.
   f. If the bidder fails to meet the contract goal, evidence of good faith efforts, as described below shall be submitted.

3. Documentation. The Contractor shall keep such records as are necessary to show compliance with the Sponsor's DBE Program and, on the request of the Sponsor, shall make such records available for review by the Sponsor and the FAA.
   a. Attendance at pre-bid meetings scheduled to inform DBE’s of the project.
   b. Advertisement in general circulation, trade association and minority focus media concerning subcontracting opportunities.
   c. Written notice to DBE’s allowing sufficient time for reply.
   d. Follow up of initial solicitation.
   e. Selection of portions of the work likely to be performed by DBE’s.
   f. Provide interested DBE’s adequate information for bidding.
   g. Negotiation with interested DBE’s.
   h. Assist interested DBE’s with bonding, insurance or credit.
   i. Use of minority contractors’ groups and minority business assistance offices.

4. Bidders List: The bidder shall submit the name, address, DBE status, age, and gross receipts of all firms bidding or quoting subcontracts on DOT-assisted projects. The attached form shall be submitted with the Bid at the time of Bid Opening.

E. Contract Contingent Availability of Funding.

The Contract is contingent upon the City of Boise availability of funding for the project. If, for reasons beyond the control of the Sponsor, adequate funding is not available, this agreement may be terminated.

The Contractor or subcontractor, by submission of any offer and/or execution of a contract, certifies that it:

a. is not owned or controlled by one or more citizens or nationals of a foreign country included in the list of countries that discriminate against U S. firms published by the Office of the United States Trade Representative (USTR);

b. has not knowingly entered into any contract or subcontract for this project with a contractor that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;

c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the Contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on the said list for use on the project, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract at no cost to the Government.
Further, the Contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The Contractor may rely upon the certification of a prospective subcontractor, unless it has knowledge that the certification is erroneous.

The Contractor shall provide immediate written notice to the Sponsor if the Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide immediate written notice to the Contractor if, at any time, it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct, through the Sponsor, cancellation of the contract or subcontract for default, at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a Contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America, and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

F. Protest of Contractor Selection of Contract Award:

A participating bidder may object to the contract award by responding in writing to the City’s notice of intent to award the contract within seven (7) calendar days after transmittal of the Notice of Intent to Award letter. The responsive protest must set forth in specific terms the alleged reason the contract award is erroneous. The protest may not be based upon the specifications, any objection to specifications attempted to be pursued through an award protest is untimely and will not be considered.

The right to protest specifications is provided for in section 2.6. The protest must be submitted in writing. Any protest addressed to the Mayor or City Council will be referred to the City Purchasing Agent.

• Only persons who submitted a bid/proposal are allowed to protest the award.
• Protest must be in writing and received within seven (7) days of Intent to Award Letter posting.
• Purchasing will address the protest with input from Project Manager if necessary.
• After receipt of protest response bidder has three (3) working days (Monday – Friday) to protest to the City Council by submitting a protest of the decision to the City Clerk. City Clerk will then schedule the bidder for Council.
• If Federal grant funds are involved and the protestor is not satisfied with the way that the City has resolved the protest, the protestor may have the option to appeal to the City Council and then the Federal Grant Provider.
• Award protests are only allowed on formal level Bid/RFP’s. There is no protest period for the semiformal or informal Bid/RFP process.

Written protests are to be directed to: cmillar@cityofboise.org

The City of Boise reserves the right to reject any and all Bids, to waive any irregularities in the Bids received, to award on an “each item” basis (however, the Bidder may indicate “all or none”), and to accept the Bid deemed most advantageous to the best interest of the City of Boise.

Boise Airport
The City of Boise, Idaho
CITY OF BOISE

PROPOSAL FORM

TO: City of Boise at the Purchasing Office
150 North Capitol Boulevard
Boise, Idaho 83702

PROJECT: Realignment of Taxiway H and Mill/Overlay Portions of Taxiways J And B
FAA AIP Project No.: 3-16-0003-073-2020
City Project No.: F/B 20-207
RS&H Project No.: 225-0005-022

BIDDER: ________________________________________________

BIDDER’S ADDRESS: _______________________________________

DATE: ____________________________________________________

BIDDER’S REPRESENTATIVE (to be contacted for additional information on this proposal):

(Name) ____________________________________ (Telephone Number) ____________________

The undersigned declares that no person in the employ of the City of Boise, Idaho (herein referred to as OWNER) is peculiarly interested in this proposal, or in the contract or the work which he proposed to do; that he has carefully examined the contract and specifications and has informed himself fully in regard to all conditions pertaining to the site where the work is to be done and carefully estimated on the work. He understands that the OWNER, its agents and employees, are not to be in any manner held responsible for the accuracy of, or bound by, any estimates or plans of underground structures relating to the work and that if any have been given or made, they are to be considered solely as a base for filling out and preparing several proposals.

The undersigned proposes to furnish all labor, equipment material required for the above outlined construction at the airport known as Boise Airport located in the City of Boise, Idaho, in accordance with the accompanying specifications and plans prepared for the OWNER for the sums specified herein, subject to additions and deductions according to the specifications and in all respects to the terms thereof.

It is understood that all workmanship and materials under all items of work are guaranteed for one year from the date of final acceptance, unless otherwise specified. It is understood that the OWNER reserves the right to accept or reject any or all bids and to waive any informalities. Wages not less than the minimum rates or wages, as pre-determined for this project by the Secretary of the U.S. Department of Labor, were used in the preparation of this proposal. It is agreed that the description under each item, being stated, implies although it does not mention, all incidentals and that the prices stated are intended to cover all such work, materials and incidentals and constitute bidders obligations as described in the specifications, and any details not specifically mentioned, but evidently included in the contract shall be compensated for in the item which most logically includes it.
The bidder expressly agrees that should environmental permits not be granted for items contingent on their receipt, the OWNER shall delete those items from the Contract without Supplemental Agreement or Change Order. In this event, the bidder agrees that the unit prices proposed for non-environmentally contingent items will remain unchanged and that no claims relating to the deletion of items contingent on environmental permitting will be made.

The Owner reserves the right to award any, all, or none of the alternate bid items.

Enclosed herewith is the Proposal Bond in the form specified in Section 20 of the General Provisions which is submitted as a guarantee of the good faith of the Proposal. The Bidder agrees that, upon receipt of notice to award, he will, within 10 calendar days, execute the Contract in accordance with the Proposal as accepted, and satisfy the Contract bonding and insurance requirements stipulated in Section 30 of the General Provisions; and that upon his failure or refusal to do so, the Proposal Bond accompanying his bid shall be forfeited to and become the property of the OWNER as liquidated damages for such failure or refusal.

ADDENDA

The bidder hereby acknowledges that he has received the following addenda:

<table>
<thead>
<tr>
<th>Addenda No.</th>
<th>Dated</th>
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<tbody>
<tr>
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</table>

LIQUIDATED DAMAGES

The bidder acknowledges that he is aware of the liquidated damages that are part of this contract:

<table>
<thead>
<tr>
<th>PHASE</th>
<th>LIQUIDATED DAMAGES COST</th>
<th>ALLOWED CONSTRUCTION TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1A</td>
<td>$2,500/day</td>
<td>55 Calendar Days</td>
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<tr>
<td>Phase 1B</td>
<td>$2,500/day</td>
<td>35 Calendar Days</td>
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<tr>
<td>Phase 1C</td>
<td>$2,500/day</td>
<td>15 Calendar Days</td>
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<tr>
<td>Phase 2A</td>
<td>$2,500/day</td>
<td>3 Calendar Days</td>
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<tr>
<td>Phase 2B</td>
<td>$2,500/day</td>
<td>7 Calendar Days</td>
</tr>
<tr>
<td>Phase 3</td>
<td>$2,500/day</td>
<td>30 Calendar Days</td>
</tr>
</tbody>
</table>

The total contract duration is 90 calendar days. Contract time starts on NTP.
TAXES

The Bidder agrees that any applicable Federal, State and Local sales and use taxes, are included in the stated bid prices. Since often the City of Boise, Idaho is exempt from taxes for equipment, materials, and services, it is the responsibility of the Contractor to determine whether sales taxes are applicable. The Contractor is liable for any applicable taxes which are not included in the stated bid prices.

NOTE: THE BID PRICES SET FORTH ON THE ATTACHED SHEETS SHALL BE CONSIDERED FIRM BIDS NOT SUBJECT TO PRICE ADJUSTMENT,

SIGNATURE ACKNOWLEDGES THAT: (Check below)

_____ Bid is in full compliance with the Plans and Specifications.

(CORPORATE SEAL)

ATTEST:                      BIDDER:
Signature

By: ______________________   By: ______________________

Title: ____________________  Title: ____________________
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## CITY OF BOISE – BID SCHEDULE I (FEDERAL)

**AIRPORT:** BOISE AIRPORT  
**PROJECT:** REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B  
**FAA AIP PROJ. NO.:** 3-16-0003-073-2020  
**CITY PROJ. NO.:** F/B 20-207  
**RS&H PROJECT NO.:** 225-0005-022

<table>
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<th>Item No.</th>
<th>Item Description and Unit Price in Words</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Unit Price in Numbers</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-100-14.1</td>
<td>Contractor Quality Control Program at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C-100-14.2</td>
<td>Permitting Allowance at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>AL</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C-102-5.1</td>
<td>Storm Water Pollution Prevention Plan (SWPPP) at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C-102-5.2</td>
<td>Implement Approved SWPPP Allowance at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C-105-6.1</td>
<td>Mobilization at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
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<tr>
<td>Item No.</td>
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<tr>
<td>P-101-5.1</td>
<td>2-Inch Nominal Depth Milling at _____________________ dollars and _____________________ cents</td>
<td>260</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.2</td>
<td>2.5-Inch Nominal Depth Milling at _____________________ dollars and _____________________ cents</td>
<td>5,100</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.3</td>
<td>3-Inch Nominal Depth Milling at _____________________ dollars and _____________________ cents</td>
<td>19,550</td>
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<td>$</td>
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<tr>
<td>P-101-5.4</td>
<td>Runway Lap Joint Mill at _____________________ dollars and _____________________ cents</td>
<td>100</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.5</td>
<td>Full Depth Asphalt Removal at _____________________ dollars and _____________________ cents</td>
<td>20,350</td>
<td>SF</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.6</td>
<td>Full Depth Asphalt/PCC Removal at _____________________ dollars and _____________________ cents</td>
<td>600</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.7</td>
<td>Pavement Marking Blackout at _____________________ dollars and _____________________ cents</td>
<td>600</td>
<td>SF</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.8</td>
<td>Pavement Marking Obliteration at _____________________ dollars and _____________________ cents</td>
<td>3,500</td>
<td>SF</td>
<td>$</td>
<td>$</td>
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<td>Item No.</td>
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<tr>
<td>P-105-5.1</td>
<td>Temporary Construction Items at ____________________________ dollars and ____________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-151-4.1</td>
<td>Clearing at ____________________________ ____________________________ dollars and ____________________________ cents</td>
<td>5</td>
<td>AC</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-152-4.1</td>
<td>Unclassified Excavation at ____________________________ dollars and ____________________________ cents</td>
<td>32,100</td>
<td>CY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-152-4.2</td>
<td>Over-Excavation at ____________________________ dollars and ____________________________ cents</td>
<td>3,210</td>
<td>CY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-154-5.1</td>
<td>Subbase Course at ____________________________ dollars and ____________________________ cents</td>
<td>12,120</td>
<td>CY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-154-5.2</td>
<td>Separation Fabric at ____________________________ dollars and ____________________________ cents</td>
<td>20,500</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-209-5.1</td>
<td>Crushed Aggregate Base Course at ____________________________ dollars and ____________________________ cents</td>
<td>4,250</td>
<td>CY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-401-8.1</td>
<td>Bituminous Surface Course at ____________________________ dollars and ____________________________ cents</td>
<td>13,200</td>
<td>TON</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-401-8.2</td>
<td>Bituminous Material, PG 70-28 at ____________________________ dollars and ____________________________ cents</td>
<td>792</td>
<td>TON</td>
<td>$</td>
<td>$</td>
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<td>Item No.</td>
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<tr>
<td>P-603-5.1</td>
<td>Bituminous Tack Coat at ______________________ dollars and ______________________ cents</td>
<td>3,600</td>
<td>GAL</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-620-5.1</td>
<td>Pavement Markings without Reflective Beads – Black Outline at ______________________ dollars and ______________________ cents</td>
<td>20,000</td>
<td>SF</td>
<td>$</td>
<td>$</td>
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<td>P-620-5.2</td>
<td>Pavement Markings without Reflective Beads – Prime Coat at ______________________ dollars and ______________________ cents</td>
<td>20,750</td>
<td>SF</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-620-5.3</td>
<td>Temporary Pavement Markings at ______________________ dollars and ______________________ cents</td>
<td>210</td>
<td>SF</td>
<td>$</td>
<td>$</td>
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<tr>
<td>D-701-4.1</td>
<td>Remove Reinforced Concrete Pipe (10&quot;-18&quot;) at ______________________ dollars and ______________________ cents</td>
<td>610</td>
<td>LF</td>
<td>$</td>
<td>$</td>
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<tr>
<td>D-701-4.2</td>
<td>Remove Corrugated Metal Pipe (15&quot;-18&quot;) at ______________________ dollars and ______________________ cents</td>
<td>1,910</td>
<td>LF</td>
<td>$</td>
<td>$</td>
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<tr>
<td>D-701-4.3</td>
<td>Install New 18&quot; RCP Class V, Complete at ______________________ dollars and ______________________ cents</td>
<td>890</td>
<td>LF</td>
<td>$</td>
<td>$</td>
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<tr>
<td>D-701-4.4</td>
<td>Install New 15&quot; RCP Class V, Complete at ______________________ dollars and ______________________ cents</td>
<td>910</td>
<td>LF</td>
<td>$</td>
<td>$</td>
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<tr>
<td>D-705-5.1</td>
<td>Remove and Cap 4-inch Underdrain Pipe and Cleanout at _________ dollars and ___________________________ cents</td>
<td>70</td>
<td>LF</td>
<td>$</td>
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<tr>
<td>D-705-5.2</td>
<td>4-inch Perforated Underdrain Pipe, Complete at _________ dollars and ___________________________ cents</td>
<td>1,600</td>
<td>LF</td>
<td>$</td>
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<tr>
<td>D-705-5.3</td>
<td>4-Inch Non-Perforated Underdrain Pipe at _________________________ dollars and _______________________ cents</td>
<td>275</td>
<td>LF</td>
<td>$</td>
<td></td>
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<tr>
<td>D-705-5.4</td>
<td>4-Inch Underdrain Cleanout at _________________________ dollars and ________________________ cents</td>
<td>15</td>
<td>EA</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>D-751-5.1</td>
<td>Inlet Removal at _________________________ dollars and _______________________ cents</td>
<td>7</td>
<td>EA</td>
<td>$</td>
<td></td>
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<tr>
<td>D-751-5.2</td>
<td>Install Underdrain Inspection Pit at _________________________ dollars and _______________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td></td>
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<tr>
<td>D-751-5.3</td>
<td>Tie to Existing Catch Basin at _________________________ dollars and _______________________ cents</td>
<td>3</td>
<td>EA</td>
<td>$</td>
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<tr>
<td>D-751-5.4</td>
<td>Install New Inlet, Type I at _________________________ dollars and _______________________ cents</td>
<td>5</td>
<td>EA</td>
<td>$</td>
<td></td>
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<tr>
<td>D-751-5.5</td>
<td>Install New Manhole, Type I at _________________________ dollars and _______________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
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</tr>
<tr>
<td>Item No.</td>
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<td>Unit</td>
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<tr>
<td>D-751-5.6</td>
<td>Adjust Manhole at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-105-7.1</td>
<td>Temporary Airfield Lighting at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-105-7.2</td>
<td>Removal of Guidance Sign and Foundation at ___________________________ dollars and ___________________________ cents</td>
<td>6</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-105-7.3</td>
<td>Removal of Elevated Taxiway Edge Light and Base at ___________________________ dollars and ___________________________ cents</td>
<td>43</td>
<td>EA</td>
<td>$</td>
<td>$</td>
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<tr>
<td>L-105-7.4</td>
<td>Removal of Elevated Taxiway Edge Light, Base to Remain at ___________________________ dollars and ___________________________ cents</td>
<td>14</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-105-7.5</td>
<td>Removal of In-Pavement Taxiway Edge Light, Base to Remain at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
<td>Unit</td>
<td>Unit Price in Numbers</td>
<td>Total Amount</td>
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<tr>
<td>L-105-7.6</td>
<td>Removal of In-Pavement Runway Edge Light and Base at ________________________________________________</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td>$</td>
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<tr>
<td>L-105-7.7</td>
<td>Removal of Base Can with Retroreflective Marker Fastened to Cover Plate at ____________________________</td>
<td>3</td>
<td>EA</td>
<td>$</td>
<td>$</td>
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<td></td>
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<tr>
<td>L-105-7.8</td>
<td>Removal of Retroreflective Taxiway Edge Marker at ____________________________________________________</td>
<td>8</td>
<td>EA</td>
<td>$</td>
<td>$</td>
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<tr>
<td>L-105-7.9</td>
<td>Removal of Surface Mounted Taxiway Centerline Retroreflective Marker at ___________________________________________________________________________</td>
<td>24</td>
<td>EA</td>
<td>$</td>
<td>$</td>
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<tr>
<td>L-105-7.10</td>
<td>Removal of Base Can at ______________________________________________________________________________</td>
<td>4</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
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<td></td>
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<tr>
<td>L-105-7.11</td>
<td>Removal of Electrical Handhole at __________________________________________________________________</td>
<td>3</td>
<td>EA</td>
<td>$</td>
<td>$</td>
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<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
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<td>Total Amount</td>
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</tr>
<tr>
<td>L-108-5.1</td>
<td>No. 8 AWG, 5kV, L824, Type C Cable, Installed in Trench, Duct Bank or Conduit at $_____________ dollars and $________ cents</td>
<td>14,050</td>
<td>LF</td>
<td>$</td>
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<tr>
<td>L-108-5.2</td>
<td>No. 6 AWG, Solid, Bare Counterpoise Wire, Installed in Trench, Above the Duct Bank at $_____________ dollars and $________ cents</td>
<td>4,250</td>
<td>LF</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-109-7.1</td>
<td>Installation of Equipment within Existing vault at $_____________ dollars and $________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-110-5.1</td>
<td>Clear Existing Conduit, Remove Existing Cables at $_____________ dollars and $________ cents</td>
<td>5,900</td>
<td>LF</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-110-5.2</td>
<td>Removal of Cable and Conduit at $_____________ dollars and $________ cents</td>
<td>2,650</td>
<td>LF</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-110-5.3</td>
<td>Concrete-Encased, 1-Way, 2-Inch PVC Conduit, Schedule 40 at $_____________ dollars and $________ cents</td>
<td>285</td>
<td>LF</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-110-5.4</td>
<td>Concrete-Encased, 3-Way, 3-Inch PVC Conduit, Schedule 40 at $_____________ dollars and $________ cents</td>
<td>310</td>
<td>LF</td>
<td>$</td>
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</tr>
<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
<td>Unit</td>
<td>Unit Price in Numbers</td>
<td>Total Amount</td>
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<tr>
<td>L-110-5.5</td>
<td>Concrete-Encased, 4-Way, 4-Inch PVC Conduit, Schedule 80 at ________________ dollars</td>
<td>330</td>
<td>LF</td>
<td>$</td>
<td>$</td>
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<tr>
<td></td>
<td>and ________________ cents</td>
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<tr>
<td>L-110-5.6</td>
<td>Concrete-Encased Existing 2-Way, 4-Inch PVC Conduit, Schedule 40 ________________ dollars</td>
<td>85</td>
<td>LF</td>
<td>$</td>
<td>$</td>
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<td></td>
<td>and ________________ cents</td>
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<tr>
<td>L-110-5.7</td>
<td>Concrete Encase Existing 4-Way, 5-Inch PVC Conduit at ________________ dollars</td>
<td>235</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>and ________________ cents</td>
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<td></td>
</tr>
<tr>
<td>L-110-5.8</td>
<td>Concrete Encase Existing 1-Way, 3-Inch PVC Conduit at ________________ dollars</td>
<td>500</td>
<td>LF</td>
<td>$</td>
<td>$</td>
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<td></td>
<td>and ________________ cents</td>
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<tr>
<td>L-110-5.9</td>
<td>Removal of Miscellaneous Concrete Duct Banks at ________________ dollars</td>
<td>520</td>
<td>LF</td>
<td>$</td>
<td>$</td>
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<tr>
<td></td>
<td>and ________________ cents</td>
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</tr>
<tr>
<td>L-115-5.1</td>
<td>Electrical Handhole, 4’x4’x4’, Aircraft Rated at ________________ dollars</td>
<td>3</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>and ________________ cents</td>
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<td></td>
</tr>
<tr>
<td>L-115-5.2</td>
<td>Electrical Handhole, 4’x4’x4’, Aircraft Rated at ________________ dollars</td>
<td>2</td>
<td>EA</td>
<td>$</td>
<td>$</td>
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<td></td>
<td>and ________________ cents</td>
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</tr>
<tr>
<td>L-115-5.3</td>
<td>L-867B Base Can in New Asphalt Pavement at ________________ dollars</td>
<td>20</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>and ________________ cents</td>
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<tr>
<td>Item No.</td>
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<td>Unit</td>
<td>Unit Price in Numbers</td>
<td>Total Amount</td>
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</tr>
<tr>
<td>L-115-5.4</td>
<td>L-867B Base Can in Existing Pavement at __________________________ dollars and __________________________ cents</td>
<td>1</td>
<td>EA $</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-115-5.5</td>
<td>New 3/8” Cover Plate and Bolts for Existing L-867B Base Can at</td>
<td>1</td>
<td>EA $</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>__________________________ dollars and __________________________ cents</td>
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</tr>
<tr>
<td>L-115-5.6</td>
<td>Extension for Existing L-867B Base Can at __________________________ dollars and __________________________ cents</td>
<td>2</td>
<td>EA $</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-125-5.1</td>
<td>L-861T(L) Taxiway Elevated Edge Light on New L-867 B Light Base in New</td>
<td>21</td>
<td>EA $</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Pavement at __________________________ dollars and __________________________ cents</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>L-125-5.2</td>
<td>L-861T(L) Taxiway Elevated Edge Light on New 12” L-867B Light Base in New</td>
<td>1</td>
<td>EA $</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Pavement at __________________________ dollars and __________________________ cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L-125-5.3</td>
<td>L-861T Elevated Taxiway Edge Light on New L-867 Light Base in New Pavement</td>
<td>8</td>
<td>EA $</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>at __________________________ dollars and __________________________ cents</td>
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<td></td>
</tr>
<tr>
<td>L-125-5.4</td>
<td>L-861T Elevated Taxiway Edge Light on Existing L-867B Light Base with Risers</td>
<td>13</td>
<td>EA $</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>at __________________________ dollars and __________________________ cents</td>
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<tr>
<td>Item No.</td>
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</tr>
<tr>
<td>L-125-5.5</td>
<td>L-862 Elevated Runway Edge Light on Adapter for Existing L-868B Light Base at ____________________ dollars and ____________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-125-5.6</td>
<td>L-850C In-Pavement Runway Edge Light on New L-868B Light Base at ____________________ dollars and ____________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-125-5.7</td>
<td>L-853 Elevated Taxiway Edge Retroreflective Marker at ____________________ dollars and ____________________ cents</td>
<td>13</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-125-5.8</td>
<td>L-858(L) Guidance Sign on New Foundation at ____________________ dollars and ____________________ cents</td>
<td>5</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-125-5.9</td>
<td>L-804 Elevated Runway Guard Light, Isolation Transformer and Base Can at ____________________ dollars and ____________________ cents</td>
<td>2</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

**TOTAL AMOUNT OF SCHEDULE I (FEDERAL) (IN WORDS):**

_____________________________ DOLLARS

_____________________________ CENTS

**Total Schedule I (Federal) Amount:** ____________

**NOTE: BID AWARD WILL BE MADE BASED ON THE LOWEST TOTAL AMOUNT FOR SCHEDULE I (FEDERAL)**
### CITY OF BOISE – BID SCHEDULE II (NON-FEDERAL)

**AIRPORT:** BOISE AIRPORT  
**PROJECT:** REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B  
**FAA AIP PROJ. NO.:** 3-16-0003-073-2020  
**CITY PROJ. NO.:** F/B 20-207  
**RS&H PROJECT NO.:** 225-0005-022  

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description and Unit Price in Words</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Unit Price in Numbers</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-101-5.9</td>
<td>Crack Repair at ________________________ dollars and ________________________ cents</td>
<td>1,800</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-101-5.10</td>
<td>Removal of Bituminous Pavement at ________________________ dollars and ________________________ cents</td>
<td>300</td>
<td>SY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-101-5.11</td>
<td>Crushed Drained Rock Placement 4-Inch Nominal Depth at ________________________ dollars and ________________________ cents</td>
<td>8,100</td>
<td>SY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-109-5.1</td>
<td>Sawcutting at ________________________ dollars and ________________________ cents</td>
<td>380</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>ISPWC-202.4.1.D.1</td>
<td>Unclassified Excavation at ________________________ dollars and ________________________ cents</td>
<td>289</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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</tbody>
</table>
## Required at Bid Opening

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description and Unit Price in Words</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Unit Price in Numbers</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-608-R-8.1</td>
<td>Asphalt Surface Treatment at ______________________ dollars and cents</td>
<td>1,660</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>ISPWC 705.4.1.A.1</td>
<td>Portland Cement Concrete Pavement (Class 6000 AF, 10&quot; Thick) at ______________________ dollars and cents</td>
<td>289</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>ISPWC 802-4.1.A.1</td>
<td>Re-Grade and Recompact Base Course at ______________________ dollars and cents</td>
<td>289</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>L-109-7.2</td>
<td>Installation of ACE 3 ALCMS/CCR Interface Unit Including Graphic Update at ______________________ dollars and ______________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
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</tbody>
</table>

TOTAL AMOUNT OF SCHEDULE II (NON-FEDERAL) (IN WORDS):

____________________ DOLLARS

____________________ CENTS

Total Schedule II (Non-Federal) Amount: ____________

**NOTE:** BID AWARD WILL BE MADE BASED ON THE LOWEST TOTAL AMOUNT FOR SCHEDULE I (FEDERAL)
Pursuant to Section 67-2310, 54-1901, and 54-1902, Idaho Code, names and addresses of subcontractors to whom work will be awarded, if the undersigned is awarded the contract, are as indicated below (write "N/A", if not applicable): Public Works license will be required at time of bids signing. If available, please provide now (License information NOT required for submitting bid).

**Electrical**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Idaho Public Works Contractor's License Number</th>
<th>Electrician License Number</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

**Plumbing**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Idaho Public Works Contractor's License Number</th>
<th>Plumbing License Number</th>
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</thead>
<tbody>
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**HVAC**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Idaho Public Works Contractor's License Number</th>
<th>HVAC License Number</th>
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</tbody>
</table>
Respectfully submitted by:

Name of Business: ____________________________________________________________

Address: ____________________________________________________________________

City: ________________________________________________________________________

State: ___________________ Zip Code: __________

Phone No.: ___________________ Fax No.: __________

Federal Tax ID No.: _________________________________________________________

Email Address: ______________________________________________________________

Signature: ____________________________

Printed Name: _________________________

Title: ________________________________

Date: ________________________________
CITY OF BOISE

PROPOSAL AFFIDAVIT

The following affidavit must be executed in order that your proposal may be considered.

STATE OF IDAHO

CITY OF BOISE

__________________________ of lawful age, being first duly sworn, upon his oath, deposes and says:

That he executed the accompanying Proposal on behalf of the Contractor therein named, and that he had lawful authority so to do, and said Contractor has not directly or indirectly, entered into any agreement, expressed or implied, with any Contractor or Contractors, having for its object the controlling of the price or amount of such Proposal or any Proposals, the limiting of the Proposal of Contractors, the parceling or farming out to any Contractor or Contractors, to other persons of any part of the Contract or any of the subject matter of the Proposals, or of the profits thereof, and that he has not and will not divulge the sealed Proposal to any person whomsoever, except those having a partnership or other financial interest with him in said Proposal or Proposals, until after the sealed Proposal or Proposals are opened.

Signed: ________________________________

Subscribed and sworn to before me this ______ day of _____________ 2020

My Commission Expires:

_________________________________________ Notary Public

(date)

State Licensed to do business in _____________________________

Firm Name ___________________________ Phone Number ________________

Address _______________________________ City _______________ State ____ Zip ________

Check whether: Corporation _________ Individual _________ Partnership _________

Incorporated in the state of __________________

(If partnership, give name and address of each partner; if corporation, give name, title, and business address of President, Secretary, and Treasurer.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
The undersigned understands that the quantities of work represented in this proposal are approximate only and are intended to principally serve as a guide in evaluation of the bids.

CITY OF BOISE

PROPOSAL BOND

(Not to be filled in if a Cashier’s check is submitted)

KNOW ALL MEN BY THESE PRESENTS: That the undersigned Bidder, _________________________, as Principal, and firmly bound unto the City of Boise, Idaho in the sum of ____________________ dollars ($________________), for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THIS OBLIGATION is such that if Principal: _______________________________

1. Does not withdraw the attached Proposal of ____________________ dollars ($________________) for the improvement of Boise Airport,
FAA AIP Project No. 3-16-0003-073-2020, City Project No. F/B 20-207, for a period of forty-five (45) days after the date on which the bids are opened; and

2. Enters into the written contract and furnishes the required Certificates of Insurance, Payment and Performance Bonds, with Surety or Sureties acceptable to the City of Boise, Idaho, within ten (10) days after notice that the said Proposal is accepted, then this obligation shall be void; otherwise the same shall be in full force and the full amount of the Proposal Bond shall be paid to the City of Boise, Idaho as stipulated herein as liquidated damages.

Signed this ______ day of __________ 2020.

________________________________________
Principal

(PRINCIPAL MUST INDICATE
WHETHER CORPORATION,
PARTNERSHIP, COMPANY OR
INDIVIDUAL)
THE PERSON SIGNING FOR THE PRINCIPAL SHALL, IN HIS OWN HANDWRITING, SIGN THE PRINCIPAL’S NAME, HIS OWN NAME, AND HIS TITLE. WHERE THE PERSON SIGNING FOR A CORPORATION IS OTHER THAN THE PRESIDENT OR VICE PRESIDENT, HE MUST FURNISH A CORPORATE RESOLUTION SHOWING HIS AUTHORITY TO BIND THE CORPORATION.

(Affix Surety’s Corporate Seal)
CITY OF BOISE
SURETY’S BOND AFFIDAVIT

STATE OF _________________
COUNTY OF _______________

Before me the undersigned authority, personally appeared ____________________ Who, being duly sworn deposes and says that he is a duly authorized (resident) (non-resident) insurance agent, properly licensed under the laws of the State of ________________, and the State of Idaho, to represent ____________________________, a company authorized to make corporate surety bonds under the laws of the State of Idaho (the “Surety”).

Said ___________________ further certifies that as agent or attorney-in-fact for the said surety, he has signed the attached bond in the sum of ________________________ ($_________________) on behalf of _________________________________.

To the City of Boise, Idaho covering FAA AIP Project No. 3-16-0003-073-2020, City Project No. F/B 19-10, Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways B and J at the Boise Airport.

Said ___________________ further certifies that the premium on the said bond is $_________________ which will be paid in full directly to the surety or to him as agent or attorney-in-fact, and included in his regular commission as agent or attorney-in-fact, for the execution of said bond and that his commission will not be divided with anyone except to who is a duly authorized insurance agent properly licensed under the laws of the State of Idaho.

Countersigned:

Idaho Resident Agent

Address of Resident Agent

Address of Bond Company

Idaho Resident Agent

Phone Number

Fax Number

Surety

Attorney-in-Fact

Acknowledgement for Attorney-in-Fact:

Sworn to and Subscribed Before me this ___ Day of ________________, 2020.

Notary Public, State of ________________

My commission expires: ________________
CITY OF BOISE

EQUAL EMPLOYMENT OPPORTUNITY REPORT STATEMENT
As required by 41 CFR 60-1.7(b)

Section 60-1.7(b) of the Regulations of the Secretary of Labor requires each bidder or prospective prime Contractor and proposed Subcontractor, where appropriate, to state in the bid or at the outset of negotiations for the Contract whether it has participated in any previous Contract or Subcontract subject to the equal opportunity clause; and if so, whether it has filed with the Joint Reporting Committee, the Director, an agency, or the former President's Committee on Equal Employment Opportunity all reports due under the applicable filing requirements. In any case in which a bidder or prospective prime Contractor or proposed Subcontractor which participated in a previous Contract subject to Executive Order 10925, 11114, or 111246 has not filed a report due under the applicable filing documents, no Contract or Subcontract shall be awarded unless such Contractor submits a report covering the delinquent period or such other period specified by the FAA or the Director, OFCCP.

The Bidder (proposer) shall complete the following statement by checking the appropriate boxes. Failure to complete these blanks may be grounds for rejection of bid.

1. The Bidder (proposer) has (___) has not (___) developed and has on file at each establishment Affirmative Action Programs pursuant to 41 CFR 60-1.4 and 41 CFR 60-2.

2. The Bidder (proposer) has (___) has not (___) participated in any previous Contract or Subcontract subject to the Equal Opportunity Clause prescribed by Executive Order 10925, or Executive Order 111114, or Executive Order 11246.

3. The Bidder (proposer) has (___) has not (___) filed with the Joint Reporting Committee the annual compliance report on Standard Form 100 (EEO-1 Report).

4. The Bidder (Proposer) has (___) has not (___) submitted all compliance reports on connection with any such Contract due under the application filing requirements; and that representations indicating submission of required compliance reports signed by proposed Subcontractors will be obtained prior to award of Subcontractors.

5. The Bidder (Proposer) does (___) does not (___) employ fifty (50) or more employees.

If the Bidder (Proposer) has participated in a previous Contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Bidder (Proposer) shall submit a compliance report on Standard From 100, "Employee Information EEO-1" prior to the award of Contract.
Standard Form 100 is normally furnished to Contractors annually, based on a mailing list currently maintained by the Joint Reporting Committee. In the event a Contractor has not received the form, he may obtain it by writing to the following address: Joint Reporting Committee, 1800 G Street, Washington, DC 20506

(Name of Bidder)

By: _____________________________

Title: ___________________________

Date: ___________________________

*Must be same signature on Bid Proposal
RESTRICTIONS ON FEDERAL PUBLIC WORKS PROJECTS

RESTRICITONS ON FEDERAL PUBLIC WORKS PROJECTS

GENERAL: This clause implements provisions contained in the Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law No. 100-223.

RESTRICITONS ON CONTRACT AWARD: No contract will be awarded to a bidder (1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms, published by the United States Trade Representative (USTR) or (2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or (3) who incorporates in the project any product of a foreign country on such USTR list; unless a waiver to these restrictions is granted by the President of the United States or the Secretary of Transportation. (Notice of the granting of a waiver will be published in the Federal Register.) The USTR list currently contains the following country: Japan

CERTIFICATION: By signing this page the bidder certifies that with respect to this solicitation, and any resultant contract the bidder:

1. is ______ is not ______a contractor of a foreign country included on the USTR list;
2. has ______ has not ______ entered into any contract with a subcontractor of a foreign country included on the USTR list;
3. has ______ has not ______ entered into any contract for any product to be used on this project that is produced in a foreign country included on the USTR list.

The bidder may rely upon the certification of a prospective subcontractor for the above conditions, unless the bidder has knowledge that the certification is erroneous.

ERRONEOUS CERTIFICATION: This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the bidder knowingly rendered an erroneous certification, the sponsor may cancel this contract for default at no cost to the sponsor.

SUBCONTRACTS: The bidder shall incorporate this clause, without modification, including this paragraph (f) in all solicitations and subcontracts under this contract.

APPLICABILITY OF 18 U.S.C. 1001: This certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

_____________________________  ______________________________
Signature                        Date
NOTICE TO BIDDERS
BUY AMERICAN – STEEL AND MANUFACTURED PRODUCTS FOR CONSTRUCTION CONTRACTS (JAN 1991)

A. The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program. The following terms apply:

1. Steel and manufactured products. As used in this clause, steel and manufactured products include (1) steel produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs (b) (1) or (2) shall be treated as domestic.

2. Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.

3. Cost of components. This means the costs for production of the components, exclusive of final assembly labor costs.

B. The successful bidder will be required to assure that only domestic steel and manufactured products will be used by the Contractor, subcontractors, materialmen, and suppliers in the performance of this contract, except those-

1. that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality;

2. that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or

3. that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.
BUY AMERICAN CERTIFICATE (JAN 1991)

By submitting a bid/proposal under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment to this bid/proposal, the offeror certifies that steel and each manufactured product, is produced in the United States (as defined in the clause Buy American - Steel and Manufactured Products or Buy American- Steel and Manufactured Products for Construction Contracts) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

Offerors may obtain from the City of Boise lists of articles, materials, and supplies excepted from this provision.

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<tr>
<th>PRODUCT</th>
<th>COUNTRY OF ORIGIN</th>
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Signature ____________________________ Date ____________________________
CITY OF BOISE
CERTIFICATION OF NONSEGREGATED FACILITIES

The Federally-assisted construction contractor certifies that he will not maintain or provide, for his employees, any segregated facilities at any of his establishments and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Federally-assisted construction Contractor certifies that he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in his contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated on a basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The Federally-assisted construction contractor agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that he will retain such certifications in his files.

NOTICE TO PROSPECTIVE FEDERALLY ASSISTED CONSTRUCTION CONTRACTORS - 41 CFR 60-1.8 (VERSION 1.5/1/90)
1. A Certification of Nonsegregated Facilities shall be submitted prior to the award of a subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

2. Contractors receiving Federally-assisted construction contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATION OF NONSEGREGATED FACILITIES

1. A Certification of Nonsegregated Facilities shall be submitted prior to the award of a Federally-assisted construction contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

2. Contractors receiving subcontract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

Certification-The information above is true and complete to the best of my knowledge and belief.

__________________________________________
Name of Signer

__________________________________________
Signature of Contractor

__________________________________________
Title

__________________________________________
Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.
CERTIFICATION REGARDING DEBAREMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

The bidder/offeror certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the bidder/offeror/contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

Certification – The information above is true and complete to the best of my knowledge and belief.

_________________________________________
Name of Signer

_________________________________________
Signature of Contractor

_________________________________________
Title

_________________________________________
Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.
DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The City of Boise, Idaho (Owner) in accordance with Title VI Civil Rights Act of 1964, 78 Stat. 262, 42 USC and 49 CFR, Part 21 issued pursuant to such Act, affords Disadvantage Business Enterprises full opportunity to submit an indication of interest in response to this invitation and will not discriminate against any interested firm on the ground of race, creed, color, sex, age or national origin in a contract award. In addition, the Owner has established goals for DBE participation in Owner projects. Contact City of Boise for the DBE policy for the City of Boise. Refer to IB-14 for other DBE information.

A. The undersigned bidder/offeror has satisfied the requirements of the bid specification in the following manner (please check the appropriate space):

_______ bidder/offeror is committed to a minimum of _______% DBE utilization on this contract.

Name of bidder/offeror’s firm: __________________________________________________________

_____________________________  ____________________
Signature  Title

_____________________________  ____________________
Address  Phone

Packet Pg. 142
All firms bidding or quoting on subcontracts for this DOT-assisted project are listed below:

<table>
<thead>
<tr>
<th>FIRM NAME</th>
<th>ADDRESS</th>
<th>CERTIFIED DBE (Y or N)</th>
<th>AGE OF FIRM</th>
<th>GRS*</th>
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*GRS - Annual Gross Receipts

Enter 1 for less than $1 million
Enter 2 for more than $1 million, less than $5 million
Enter 3 for more than $5 million, less than $10 million
Enter 4 for more than $10 million, less than $15 million
Enter 5 for more than $15 million.
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**CONTRACTORS INFORMATION FORM**

**THIS FORM IS REQUIRED TO BE COMPLETED BY ALL PRIME CONTRACTORS**

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<thead>
<tr>
<th>Contractor:</th>
<th>Project #:</th>
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<th>Signature of Preparer:</th>
<th>Date:</th>
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<tr>
<th>Name, City, Phone of Subcontractor</th>
<th>DBE?</th>
<th>Items Quoted</th>
<th>Amount Quoted</th>
<th>Commit to use</th>
<th>If DBE not selected, why?</th>
<th>Information provided to subcontractor (i.e. plans, specs)</th>
<th>Date &amp; method of contact</th>
<th>Assistance with line of credit/bonding?</th>
<th>Other Assistance?</th>
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**ATTACHMENT:** FB 20-207 Specifications (E) (RES-153-20 : FB 20-207 : Realignment of Taxiway H Mill/Overlay)
DBE LETTER OF INTENT

Name of bidder/offeror’s firm: ____________________________________________________________

Address: ____________________________________________________________________________

City: ___________________________ State: ___________________________ Zip: _____________

Name of DBE firm: ____________________________________________________________________

Address: __________________________________________________________________________

City: ___________________________ State: ___________________________ Zip: _____________

Telephone: _________________________

Description of work to be performed by DBE firm:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated dollar value of this work is $__________________.

AFFIRMATION

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

______________________________ ______________________________
Signature Title

If the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.
THIS PAGE INTENTIONALLY LEFT BLANK
CITY OF BOISE
NON-COLLUSION AFFIDAVIT

STATE OF IDAHO
COUNTY OF ____________

____________________________________, being first duly sworn, deposes and says that:

1. He/She is ___________________ of _________________________, the Bidder that has
   submitted the attached bid;
2. He/She is fully informed respecting the preparation and contents of the attached bid and of all
   pertinent circumstances respecting such bid;
3. Such bid is genuine and is not a collusive or sham bid;
4. Neither the Bidder nor anyone acting on behalf of the Bidder, including the affiant, has in any
   way colluded, conspired, connived, or agreed, directly or indirectly with any other Bidder, firm or
   person to submit a collusive or sham Bid in connection with the Contract for which the attached bid
   has been submitted or to refrain from bidding in connection with such Contract, or has in any manner,
   directly or indirectly, sought by agreement or collusion or communication or conference with any
   other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to
   fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to
   secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against
   the City of Boise, Idaho or any person interested in the proposed Contract; and,
5. The price or prices quoted in the attached bid are fair and proper and are not tainted by any
   collusion, conspiracy, connivance, or unlawful agreement on the part of the bidder or anyone
   acting on his/her behalf.

____________________________________
Signature

____________________________________
Title

Subscribed and Sworn to before me on this _____ day of ___________, 2020.

____________________________________
Notary’s Signature

____________________________________
Notary’s Printed Name

Notary Public, in and for ____________ County,
My commission expires: ___________________
CONTRACTOR'S AFFIDAVIT CONCERNING TAXES

STATE OF IDAHO

COUNTY OF ______________

Pursuant to the Idaho Code, Title 63, Chapter 15, I, undersigned, being duly sworn, depose and certify that all taxes, excises, and license fees due to the State of Idaho and its taxing units, for which I or my property is liable, then due or delinquent, have been paid, or arrangements have been made, before entering into a contract for construction of any public works in the State of Idaho.

_______________________________________
Name of Contractor

_______________________________________
Address

_______________________________________
City and State

_______________________________________
Authorized Representative

Subscribed and Sworn to before me on this _____ day of ___________, 2020.

______________________________________
Notary Public, residing at

_______________________________________
My commission expires

END OF CONTRACTOR'S AFFIDAVIT CONCERNING TAXES
EQUAL OR EQUIVALENT REQUESTS

These specifications are given as guidelines. Vendors are encouraged to propose equals or equivalents that meet or exceed the quality, performance and use of the brand, model or specification in this Bid. It is not the intention of the specifications to restrict the competitive bid process, nor to direct the Bidder to a specific make, model, or brand, unless there is a specific requirement by the City, in which case, that will be so stated within this Bid.

The City of Boise reserves the right to contact the Bidder for a clarification of any deviation from the specifications. Failure to submit an Equal or Equivalent Request Form for an apparent deviation from a specification may lead to the rejection of the entire bid by the City.

The burden of proof is on the requestor, make sure that you supply complete information for the City to evaluate your request. The determination of what is an acceptable equal or equivalent rests entirely with Boise City. Please include marketing brochures of the proposed equals or equivalents.

Equal or equivalent requests may be received prior to the bid opening:

It is highly recommended that the Bidder submit the Equal or Equivalent Request Form prior to the time and date set for the bid opening. Forms submitted prior to the bid opening must be received in the Purchasing office no later than ________________, 2020.

The City will review the request and respond to the Bidder prior to bid opening regarding its acceptance or rejection of the equal or equivalent request.

Equal or equivalent requests received with the bid or proposal:

The City will review the equal or equivalent request of the apparent low Bidder and respond to the Bidder regarding its acceptance or rejection of the request.

If the equal or equivalent request is included with the bid, the Bidder assumes the risk of the request being unacceptable to the City, at which point the bid will be rejected and deemed non-responsive.

Equal or equivalent request forms will not be accepted after the time and date set forth for the opening of this bid.
EQUAL, APPROVED EQUAL, OR EQUIVALENT REQUEST FORM

TO: Boise City Division of Purchasing, 150 N. Capitol Boulevard, Boise, ID 83702

PROJECT: Boise Airport, FAA AIP Project No. 3-16-0003-073-2020 City Project No. F/B 20-207
Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

We hereby submit for your consideration the following product instead of the specified item for the above project:

<table>
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<tr>
<th>Specification #</th>
<th>Proposed “Or-Equal” Product</th>
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Attach complete technical data, including laboratory tests, if applicable.

Differences between “Or-Equal” request and specified item:

____________________________________________________________________________________

What affect does “Or-Equal” request have on the use of the product?

____________________________________________________________________________________

Manufacturer’s guarantees of the proposed and specific items are:

________ Same ________ Different (Explain on an attached sheet of paper)

The undersigned certifies that the function, appearance, and quality of the “or-equal” products are equivalent or superior to the specified product.

Company

Address

Submitted by

Signature

ACTION TAKEN BY BOISE CITY:

________ Accepted

________ Not Accepted

_____ Accepted as noted

_____ Received too late

By: _____________________________

Date: ___________________________

Remarks: ________________________

***Submit six (6) business days prior to bid opening***
NOTICE OF AWARD

STATE OF IDAHO
CITY OF BOISE

THIS CONTRACT AWARD made this ________ day of ____________, 20____, by the City of Boise, Idaho, hereinafter called the OWNER, to_________________________________________________________, hereinafter called the CONTRACTOR, is for the completion of a certain project described as:

Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B
FAA AIP Project No. 3-16-0003-073-2020, City Project No. F/B 20-207 for the use and benefit of the Owner as shown on the plans and described in the specifications as prepared by:

RS&H, Inc.
5215 Wiley Post Way, Suite 510
Salt Lake City, Utah 84116

The project consists of the Base Bid plus the following Alternates, if applicable:

________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

The consideration to be paid by the Owner to the Contractor for completion of the project in accordance with the contract documents is the sum of________________________________________________________

Dollars__________
Commencement of work under this contract shall begin on the effective date of the Contractor's receipt of a Notice to Proceed issued by the Owner and the project is to be fully completed per the calendar days as specified under Section 80-08 unless otherwise subsequently agreed.

OWNER: City of Boise

By:

______________________________
Name

______________________________
Signature

______________________________
Printed Name

______________________________
Title

Acknowledgement of Receipt of Contract Award by Contractor:

______________________________
Name

______________________________
Signature

______________________________
Printed Name

______________________________
Title

DATE: ___________________________
Construction Contract Agreement
Purchasing Contract Number F/B 20-207

Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

Contractor:

Owner: City of Boise – Boise Airport, Ada County, Idaho, a municipal corporation

THIS AGREEMENT, made this _____ day of __________, 2020, by and between the City of Boise, a municipal corporation organized under the laws of the State of Idaho, hereinafter referred to as “Owner”, and Contractor, hereinafter referred to as “Contractor”, a corporation organized under the laws of the State of Idaho.

The Contractor shall commence work with adequate force and equipment on the dates to be specified in a written order of the Owner and shall substantially complete within 90 Calendar Days from and including the dates stipulated in the “Notice to Proceed.”

The Contractor shall fully guarantee his workmanship and materials furnished for a period of one year following the date of final acceptance of the work. The performance and payment bonds shall remain in full force for this one year period.

If Contractor fails to complete the Work by the date specified herein for achievement of Substantial Completion, such as date may be adjusted pursuant to the Contract Documents, Owner shall deduct from progress payments or any other funds remaining due to Contractor or, if no funds remain due, Contractor shall pay to Owner the amount specified under the Supplemental Provisions, Subsection 80-08 of the General Provisions for each day that the Work remains uncompleted beyond the specified Substantial Completion Date for each phase of work. Such sum is hereby, in view of the difficulty of estimating such damages, agreed upon by Contractor and Owner as liquidated damages of $2500 per calendar day that Owner shall suffer by such default and not by way of penalty.

1. Statement of Work: The Contractor shall furnish labor, material and equipment for, and perform the work described herein for the consideration stipulated, and in compliance with State and City Codes. Contract documents consist of the following together with any amendments that may be agreed to in writing by both parties:

   Bid Proposal
   Contract Agreement
   Specifications
   Acknowledgements
   Property “All-Risk” Insurance
   Performance Bond
   Labor & Payment Bond
   Liability Insurance
   Workers’ Compensation
   Automobile Insurance

2. Amount of Contract: In an amount Not to Exceed:

3. Term of Contract: The work to be performed under this contract shall commence upon receipt of Notice to Proceed as provided in the General Provisions, and shall terminate in ______ days, unless sooner terminated as herein provided.

Schedule I (Federal) project work includes: Reconstruct Taxiway H to be perpendicular with Runway 10R-28L and mill and overlay Taxiways J and B. Schedule II (Non-Federal) project work includes: Fill infield areas along Taxiway H with crushed aggregate and construct two (2) 72 square yard Portland Cement concrete pads at the UPS West Ramp. Schedule I and II will be completed during the 2020 construction season and have a total contract time of 90 calendar days for substantial completion.

4. Indemnification and Insurance:

CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND
MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

CONTRACT FORMS
FEBRUARY 26, 2020
ISSUED FOR BID

Attachment: FB 20-207 Specifications (E) (RES-153-20 ; FB 20-207, Realignment of Taxiway H, Mill/Overlay Portions of Taxiways J & B, Knife...
The Contractor shall indemnify and save and hold harmless the Owner from and for any and all losses, claims, actions, judgments for damages, or injury to persons or property and losses and expenses caused or incurred by the Contractor, its servants, agents, employees, guests, and business invitees, and not caused by or arising out of the tortious conduct of Owner or its employees. In addition, the Contractor shall maintain, and specifically agrees that it will maintain, throughout the term of this Agreement, liability insurance, in which the Owner shall be named an additional insured in the minimum amount as specified in the Idaho Tort Claims Act set forth in Title 6, Chapter 9 of the Idaho Code (currently, a minimum of $1,000,000). The limits of insurance shall not be deemed a limitation of the covenants to indemnify and save and hold harmless Owner; and if Owner becomes liable for an amount in excess of the insurance limits, herein provided, the Contractor covenants and agrees to indemnify and save and hold harmless Owner from and for all such losses, claims, actions, or judgments for damages or liability to persons or property. The Contractor shall provide Owner with a Certificate of Insurance, or other proof of insurance evidencing compliance with the requirements of this paragraph and file such proof of insurance with the Owner. In the event the insurance minimums are changed, Contractor shall immediately submit proof of compliance with the changed limits.

Contractor shall maintain automobile insurance with a limit of no less than $500,000 per occurrence for owned, non-owned and hired vehicles. If Contractor has no owned motor vehicles, then hired and non-owned motor vehicle liability coverage with limits not less than $500,000 per accident for bodily injury and property damage is required. Where applicable, the City of Boise shall be named as an additional insured.

Contractor shall secure, pay for and maintain all-risk or special form builders risk insurance, covering risks of physical loss or damage to the Facility (including without limitation the transmission lines to the interconnection facilities, buildings, temporary structures, materials, supplies and equipment to be incorporated in the Work), from perils including, but not limited to, fire, collapse, flood, earth movement, lightning, collapse, testing, debris removal, demolition and increased cost of construction, expediting expense, extra expense and all other perils not specifically excluded under a standard “all-risk” or special form builders risk policy. Such insurance shall cover all property during construction and testing, and shall include the Owner, Design-Builder, Consultants, Contractors, and Subcontractors to the Project as insureds. The policy shall be written on a replacement cost basis and shall contain an agreed amount endorsement waiving any coinsurance penalty.

Additionally, the Contractor shall have and maintain during the life of this contract, statutory Workers Compensation, regardless of the number of employees, or lack thereof, to be engaged in work on the project under this agreement (including himself) in the statutory limits as required by law. In case any such work is sublet, the Contractor shall require the subcontractor provide Workers Compensation Insurance for himself and any/all the latter’s employees to be engaged in such work. Proof of insurance must be provided to the owner prior to the start of work.

Proof of insurance shall be provided to City of Boise, Purchasing Office, P.O. Box 500, Boise, ID. 83701.

5. Independent Contractor: In all matters pertaining to this agreement, the Contractor shall be acting as an independent contractor, and neither the contractor nor any officer, employee or agent of the contractor will be deemed an employee of City. The selection and designation of the personnel of the Owner in the performance of this agreement shall be made by the Owner.

6. Compensation: For performing the services specified in Section 1 herein, Owner agrees to reimburse Contractor according to the attached bid specification. Payment will not include any sub-contract or other personal services pay except as may be agreed to in writing in advance by the parties. Change Orders may be issued, subject to Purchasing/Council approval.

7. Method of Payment: Contractor will invoice the (insert Department name and address) directly for all current amounts earned under this Agreement. Owner will pay all invoices within forty five (45) days after receipt of acceptable invoice.
8. **Notices**: Any and all notices required to be given by either of the parties hereto, unless otherwise stated in this agreement, shall be in writing and be deemed communicated when mailed in the United States mail, certified, return receipt requested, addressed as follows:

   City of Boise  
   Boise Airport  
   P. O. Box 500  
   Boise, Idaho 83701

   **CONTRACTOR NAME**  
   **CONTRACTOR ADDRESS**  
   **CITY, STATE ZIP**

Either party may change their address for the purpose of this paragraph by giving written notice of such change to the other in the manner herein provided.

9. **Attorney Fees**: Should any litigation be commenced between the parties hereto concerning this Agreement, the prevailing party shall be entitled, in addition to any other relief as may be granted, to court costs and reasonable attorneys fees as determined by a Court of competent jurisdiction. This provision shall be deemed to be a separate contract between the parties and shall survive any default, termination or forfeiture of this Agreement.

10. **Time is of the Essence**: The parties hereto acknowledge and agree that time is strictly of the essence with respect to each and every term, condition and provision hereof, and that the failure to timely perform any of the obligations hereunder will constitute a breach of, and a default under, this Agreement by the party so failing to perform.

11. **Force Majeure**: Any delays in or failure of performance by Contractor shall not constitute a breach or default hereunder if and to the extent such delays or failures of performance are caused by occurrences beyond the reasonable control of Contractor, including but not limited to, acts of God or the public enemy; compliance with any order or request of any governmental authority; fires, floods, explosion, accidents; riots, strikes or other concerted acts of workmen, whether direct or indirect; or any causes, whether or not of the same class or kind as those specifically named above, which are not within the reasonable control of Contractor. In the event that any event of force majeure as herein defined occurs, Contractor shall be entitled to a reasonable extension of time for performance of its Services under this Agreement.

12. **Assignment**: It is expressly agreed and understood by the parties hereto, that the Contractor shall not have the right to assign, transfer, hypothecate or sell any of its rights under this Agreement except upon the prior express written consent of Owner.

13. **Discrimination Prohibited**: In performing the Services required herein, the Contractor shall not discriminate against any person on the basis of race, color, religion, sex, sexual orientation, gender identity/expression, national origin or ancestry, age or physical disability.

14. **Reports and Information**: At such times and in such forms as Owner may require, there will be furnished to Owner such statements, records, reports, data and information as Owner may request pertaining to matters covered by this Agreement.

15. **Audits and Inspections**: At any time during normal business hours and as often as the Owner may deem necessary, there shall be made available to the Owner for examination all of Vendor's records with respect to all matters covered by this Agreement. Vendor shall permit the Owner to audit, examine, and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment and other data relating to all matters covered by this Agreement.
16. **Compliance with Laws.** In performing the scope of services required hereunder, the Contractor shall comply with all applicable laws, ordinances, and codes of Federal, State, and local governments.

17. **Changes:** The Owner may, from time to time, request changes in the Scope of Work to be performed hereunder. Such changes, and any increase or decrease in the contractor’s compensation, which are mutually agreed upon by and between the Owner and the Contractor, shall be incorporated in written amendments to this Agreement.

18. **Termination for Cause:** If, through any cause, the contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Agreement, the Owner shall thereupon have the right to terminate this Agreement by giving written notice to the contractor of such termination and specifying the effective date thereof at least fifteen (15) days before the effective date of such termination. If this agreement is terminated for cause the Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

Notwithstanding the above, the contractor shall not be relieved of liability to the Owner for damages sustained by the Owner by virtue of any breach of this Agreement by the Contractor, and the Owner may withhold any payments to the Contractor for the purposes of set-off until such time as the exact amount of damages due the Owner from the Contractor is determined. This provision shall survive the termination of this agreement and shall not relieve the contractor of its liability to the Owner for damages, provided that the amount of such damages shall not exceed the total compensation provided for in section two of this agreement.

19. **Termination for Convenience of City:** Owner may terminate this Agreement at any time by giving at least fifteen (15) days notice in writing to the Contractor. If the Agreement is terminated by Owner as provided herein, Contractor will be paid an amount which bears the same ratio to the total compensation as the work actually performed bear to the total services of Contractor covered by this Agreement, less payments of compensation previously made. If this Agreement is terminated due to the fault of Contractor, Section 18 hereof relative to termination will apply.

20. **Contractor to Pay or Secure Taxes:** The contractor in consideration of securing the business of providing: 1) To pay promptly when all taxes due (other than on real property), excises and license fees due the state, its subdivisions, and municipal and quasi-municipal corporations therein, accrued or accruing in accordance with conditions of this Agreement, whether or not the same shall be payable at the end of such term; 2) That if said taxes, excises and license fees are not payable at the end of said term, but liability for the payment thereof exists, even though the same constitute liens upon the Contractor’s property, to secure the same to the satisfaction of the respective officers charged with the collection thereof; and 3) That, in the event of default in the payment or securing of such taxes, excises, and license fees, that Boise City may withhold from any payment due the Contractor hereunder the estimated amount of such accrued taxes, excises and license fees for the benefit of all taxing units to which said the Contractor is liable.

21. **Construction and Severability:** If any part of this Agreement is held to be invalid or unenforceable, such holding will not affect the validity or enforceability of any other part of this Agreement so long as the remainder of the Agreement is reasonably capable of completion.

22. **Non-Appropriation:** Should funding become not available, due to lack of appropriation, the Owner may terminate this agreement upon 30 (thirty) days notice.

23. **Entire Agreement:** This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral of written, whether previous to the execution hereof or contemporaneous herewith.
24. **Applicable Law.** This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Idaho, and the ordinances of the City of Boise.

25. **Approval Required.** This Agreement shall not become effective or binding until approved by the City of Boise.

26. **Acceptance and Final Payment:** Upon receipt of notice that the work is ready for final acceptance and inspection, the Owner's representative will make such inspection and when he finds the work acceptable and the contract fully performed he will have the Contractor issue a final payment request.

**END OF CONTRACT**
IN WITNESS WHEREOF, the City and the contractor/vendor have executed this Agreement as of the date first above written.

CONTRACTOR NAME
CONTRACTOR ADDRESS
CITY, STATE ZIP

________________________________________
Signature Date

________________________________________
Print Name

ACKNOWLEDGEMENT

State of __________________________
County of ________________________

On this_____day of _____________20____, before me personally appeared __________________________ known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is ________________________ and that he/she executed the foregoing instrument on behalf of said firm for the use and purposes stated therein.

Witness my hand and official seal

________________________________________
(notary signature)

(SEAL)
PURCHASING CONTRACT NUMBER____________________

APPROVED AS TO FORM AND CONTENT:

__________________________________________ Department Date

__________________________________________ Purchasing Agent Date

____________________________________________ Legal Department Date

____________________________________________ Risk Management Date

CITY OF BOISE
APPROVED BY:

__________________________________________ David H. Bieter, Mayor Date

ATTEST: CONTRACT AMOUNT:

__________________________________________ City Clerk Date

(SEAL)
LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That we CONTRACTOR NAME, CONTRACTOR ADDRESS, CITY, STATE ZIP

as Principal, and the __________________________________________ corporation,

as Surety, are held and firmly bound unto Boise City, a Municipal Corporation in the State of Idaho.

As Obligee, in the sum of ________________________________________ Dollars,

being 100% of the contract price, in lawful money of the United States, for which sum, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, Contractor has by written agreement dated ___________, 20___ enter into a contract

WHEREAS, on the _____ Day of _______________, 20___, the principal entered into a

contract with the Obligee for _______________________________________

Which contract is by reference made a part hereof and, hereafter referred to as the Contract:

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the principal will pay all laborers, mechanics, subcontractors, material suppliers and all persons who will supply said Principal or said subcontractors with provisions and supplies for the carrying on of such work, then this obligation will be null and void; otherwise to remain in full force and effect.

Signed and Sealed this ______ day of ____________, A.D. 20______________

__________________________________________
Principal

__________________________________________
Insurance Company

__________________________________________
Attorney-in-Fact

By: ______________________________________

Note: this form or a reasonable facsimile is to be completed and delivered to City of Boise Purchasing Office when contracts are signed.
THIS PAGE LEFT BLANK INTENTIONALLY
FAA REQUIRED CONTRACT PROVISIONS

FAA REQUIRED CONTRACT PROVISIONS. These provisions are hereby made part of this contract, as required.

1. ACCESS TO RECORDS AND REPORTS

ACCESS TO RECORDS AND REPORTS

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

2. AFFIRMATIVE ACTION REQUIREMENT
   (Reference: 41 CFR part 60-4, Executive Order 11246)

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION

1. The Offeror’s or Bidder’s attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

   A. Timetables
   B. Goals for minority participation for each trade (2.8%)
   C. Goals for female participation in each trade (6.9%)

These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor is also subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training shall be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project, for the sole purpose of meeting the contractor's goals, shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs (OFCCP), within 10 working days of award of any construction subcontract in excess of $10,000
at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" Lane, Douglas, Linn and Benton Counties.

3. **BREACH OF CONTRACT TERMS**
   (Reference 2 CFR § 200 Appendix II(A))

   **BREACH OF CONTRACT TERMS**

   Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

   Owner will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner’s notice will identify a specific date by which the Contractor must correct the breach. Owner may proceed with termination of the contract if the Contractor fails to correct the breach by deadline indicated in the Owner’s notice.

   The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.
4. **BUY AMERICAN PREFERENCE**  
(Reference: 49 USC § 50101)

**BUY AMERICAN CERTIFICATION**

The contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP-funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or Offeror must complete and submit the Buy America certification included herein with their bid or offers. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance.

**Certificate of Buy American Compliance for Manufactured Products**

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter “X”.

- [ ] Bidder or Offeror hereby certifies that it will comply with 49 USC § 50101 by:
  a) Only installing steel and manufactured products produced in the United States, or;
  b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;
  c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

  By selecting this certification statement, the bidder or Offeror agrees:
  1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
  2. To faithfully comply with providing US domestic product
  3. To furnish US domestic product for any waiver request that the FAA rejects
  4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

- [x] The bidder or Offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or Offeror with the apparent low bid agrees:
  1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.
  2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
  3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
  4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

**Required Documentation**
Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more than 60% of the cost of all components and subcomponents of the “item”. The required documentation for a type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety)

b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.

c) Percentage of non-domestic component and subcomponent cost as compared to total “item” component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

a) Detailed cost information for total project using US domestic product

b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

___________________________  __________________________
Date                                      Signature

___________________________  __________________________
Company Name                                      Title

CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND
MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

4.B.1.b

5. **CIVIL RIGHTS - GENERAL**  
(Reference: 49 USC § 47123)

**GENERAL CIVIL RIGHTS PROVISIONS**

The contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the contractors and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

6. **CIVIL RIGHTS – TITLE VI ASSURANCES**  
(Reference: 49 USC § 47123, FAA Order 1400.11)

**Title VI Clauses for Compliance with Nondiscrimination Requirements: Compliance with Nondiscrimination Requirements**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Statutes and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor’s noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

   a. Withholding payments to the contractor under the contract until the contractor complies; and/or

   b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

**Title VI List of Pertinent Nondiscrimination Acts and Authorities**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);

- 49 CFR part 21 (Non-discrimination in Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);


- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq*.), (prohibits discrimination on the basis of age);

- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
• Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

• The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

• Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

• Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

• Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

7. **CLEAN AIR AND WATER POLLUTION CONTROL**
   (Reference: 2 CFR § 200, Appendix II(G))

**CLEAN AIR AND WATER POLLUTION CONTROL**

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds $150,000.

8. **CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS**
   (Reference: 2 CFR § 200 Appendix II (E))

**CONTRACT WORK HOURS AND SAFETY STANDARDS ACT REQUIREMENTS**

1. Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.
In the event of any violation of the clause set forth in paragraph (1) of this clause, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this clause.

4. Subcontractors.

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

9. **COPELAND “ANTI-KICKBACK” ACT**

(Reference: 2 CFR § 200 Appendix II(D), 29 CFR parts 3 & 5)

**COPELAND “ANTI-KICKBACK” ACT**

Contractor must comply with the requirements of the Copeland “Anti-Kickback” Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

10. **DAVIS-BACON REQUIREMENTS**

(Reference: 2 CFR § 200 Appendix II(D), 29 CFR Part 5)

**DAVIS-BACON REQUIREMENTS**

1. Minimum Wages

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of
payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2 Withholding.

The Federal Aviation Administration or the sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals.
Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

1. That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;

2. That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.
(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a
training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements.

The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.


The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.


A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.


Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).


11. DEBARMENT AND SUSPENSION (NON-PROCUREMENT)

(Reference: 2 CFR part 180 (Subpart C), 2 CFR part 1200, DOT Order 4200.5)

CERTIFICATE OF OFFERER/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.
CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

12. DISADVANTAGED BUSINESS ENTERPRISE
(Reference: 49 CFR part 26)

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§ 26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than {specify number} days from the receipt of each payment the prime contractor receives from {Name of recipient}. The prime contractor agrees further to return retainage payments to each subcontractor within {specify the same number as above} days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the {Name of Recipient}. This clause applies to both DBE and non-DBE subcontractors.

13. DISTRACTED DRIVING
(Reference: Executive Order 13513, DOT Order 3902.10)

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 and involve driving a motor vehicle in performance of work activities associated with the project.
14. **ENERGY CONSERVATION REQUIREMENTS**  
(Reference: 2 CFR § 200 Appendix II(H))

**ENERGY CONSERVATION REQUIREMENTS**

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq).

15. **EQUAL OPPORTUNITY CLAUSE AND SPECIFICATIONS**  
(Reference: 2 CFR 200, Appendix II(C), 41 CFR § 60-1.4, 41 CFR § 60-4.3, Executive Order 11246)

**EQUAL OPPORTUNITY CLAUSE**

During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

3. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

7. The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules,
regulated, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS

1. As used in these specifications:
   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
   b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
   c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
   d. "Minority" includes:
      1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
      2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
      3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted...
are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

   c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.

   d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and
trainee programs relevant to the contractor's employment needs, especially those programs funded
or approved by the Department of Labor. The contractor shall provide notice of these programs to
the sources compiled under 7b above.

f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training
programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations;
by including it in any policy manual and collective bargaining agreement; by publicizing it in the
company newspaper, annual report, etc.; by specific review of the policy with all management
personnel and with all minority and female employees at least once a year; and by posting the
company EEO policy on bulletin boards accessible to all employees at each location where
construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these
specifications with all employees having any responsibility for hiring, assignment, layoff, termination,
or other employment decisions including specific review of these items with onsite supervisory
personnel such a superintendents, general foremen, etc., prior to the initiation of construction work at
any job site. A written record shall be made and maintained identifying the time and place of these
meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news
media, specifically including minority and female news media, and providing written notification to and
discussing the contractor's EEO policy with other contractors and subcontractors with whom the
contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations,
to schools with minority and female students; and to minority and female recruitment and training
organizations serving the contractor's recruitment area and employment needs. Not later than one
month prior to the date for the acceptance of applications for apprenticeship or other training by any
recruitment source, the contractor shall send written notification to organizations, such as the above,
describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women
and, where reasonable, provide after school, summer, and vacation employment to minority and
female youth both on the site and in other areas of a contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41
CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel,
for promotional opportunities and encourage these employees to seek or to prepare for, through
appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel
practices do not have a discriminatory effect by continually monitoring all personnel and employment
related activities to ensure that the EEO policy and the contractor's obligations under these
specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single
user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and
female construction contractors and suppliers, including circulation of solicitations to minority and
female contractor associations and other business associations.
p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program)
16. FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)
(Reference: 29 USC § 201, et seq.)

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers.

The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES
(Reference: 31 USC § 1352 – Byrd Anti-Lobbying Amendment, 2 CFR part 200, Appendix II(J), 49 CFR part 20, Appendix A)

CERTIFICATION REGARDING LOBBYING

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.
17. **PROHIBITION OF SEGREGATED FACILITIES**  
(Reference: 41 CFR § 60)

**PROHIBITION OF SEGREGATED FACILITIES**

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(b) “Segregated facilities,” as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

18. **OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970**  
(Reference: 20 CFR part 1910)

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor’s compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

19. **PROCUREMENT OF RECOVERED MATERIALS**  
(Reference: 2 CFR § 200.322, 40 CFR part 247)

**PROCUREMENT OF RECOVERED MATERIALS**

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

   a) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or,
   
   b) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at [www.epa.gov/epawaste/conserve/tools/cpg/products/](http://www.epa.gov/epawaste/conserve/tools/cpg/products/).

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:
a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;

b) Fails to meet reasonable contract performance requirements; or

c) Is only available at an unreasonable price.

20. **RIGHT TO INVENTIONS**  
(Reference: 2 CFR § 200 Appendix II(F), 37 CFR §401)

RIGHTS TO INVENTIONS

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within the 37 CFR §401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental or research work.

21. **TERMINATION OF CONTRACT**  
(Reference: 2 CFR § 200 Appendix II(B), FAA Advisory Circular 150/5370-10, Section 80-09)

TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.

2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.

3. Discontinue orders for materials and services except as directed by the written notice.

4. Deliver to the owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work and as directed in the written notice.

5. Complete performance of the work not terminated by the notice.

6. Take action as directed by the owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

c) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;

d) documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;

e) reasonable and substantiated claims, costs and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and

f) reasonable and substantiated expenses to the contractor directly attributable to Owner’s termination action.
Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner’s termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

22. **TRADE RESTRICTION**

(Reference: 49 USC § 50104, 49 CFR part 30)

**TRADE RESTRICTION CERTIFICATION**

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror -

a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);

b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R.; and

c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

(1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or

(2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or

(3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has knowledge that the certification is erroneous.
This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

23. VETERAN’S PREFERENCE
(Reference: 49 USC § 47112(c))

VETERAN’S PREFERENCE

In the employment of labor (excluding executive, administrative, and supervisory positions), the contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

24. TAX DELINQUENCY AND FELONY CONVICTION
(Reference: Sections 415 and 416 of Title IV, Division L of the Consolidated Appropriations Act, 2014 (Pub. L. 113-76); DOT Order 4200.6)

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

a) The applicant represents that it is ( ) is not ( ) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

b) The applicant represents that it is ( ) is not ( ) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government’s interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency’s SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies
the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

**Tax Delinquency:** A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
NOTICE TO PROCEED

TO: CONTRACTOR NAME

CONTRACTOR ADDRESS
CITY, STATE ZIP

DATE: ______________________

PROJECT: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways B and J
FAA AIP Project No. 3-16-0003-073-2020
City Project No. F/B 20-207

Effective ______, CONTRACTOR, is hereby authorized to proceed on the subject project, in accordance with the Agreement dated ______________________

The City of Boise

BY: _____________________________
Name
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE CONTRACTOR of the State of CONTRACTOR STATE and County of CONTRACTOR COUNTY hereinafter, known as the Principal, and a corporation chartered and existing under the laws of the State of ____________ and duly authorized to business in the State of Idaho as Surety, are held and firmly bound unto the City of Boise, Idaho hereinafter known as the Owner, in the penal sum of PROJECT COST being 100% of the contract price to be paid to the Owner, for the use and benefit of all persons doing work or furnishing skill, tools, machinery or materials, or subcontracting under or for the purpose of the hereinafter named contract, for which payment, well and truly to be made, we hereby bind ourselves, our heirs, executors, administrators, successors and assignees, jointly and severally, by these presents.

This obligation is, however, subject to the following conditions:

The above bound Principal has entered into a contract with the Owner under which it agrees to furnish all the labor and material and do all work necessary to construct all improvements described in these contract documents under certain terms, conditions, and stipulations and in accordance with the plans and specifications for the project, which are hereto attached and made a part of this obligation.

NOW, THEREFORE, the conditions of this obligation are such that if the above bound Principal shall faithfully and fully carry out and comply with the terms and conditions of said contract, in complete the work therein specified and in the event Contractor fails to perform, it shall be the duty of the Surety herein to assume the responsibility for the performance of the contract and to complete the work specified therein, including, but not limited to, obligations created by way of warranties and/or guarantees for workmanship and materials which warranty and/or guarantee may extend for a period of time beyond completion of said contract, and such alterations or additions as may be made therein or in the plans and specifications, and shall indemnify and save the Engineer and the Owner harmless against any claims for using any form of material process, composition or anything which is patented, and likewise indemnify and save the Engineer and the Owner harmless against all claims for damages by reason of any default or negligence, want of skill or care on the part of said Principal or Agents in and about the performance of said contract, and shall comply with all laws pertaining to said work, and shall comply with and perform any and all warranties and/or guarantees provided for in said contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

And the Surety to this bond, for value received agrees that no change, extensions of time, alterations or additions to the terms of the contract or to the work to be performed thereunder of the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alterations or additions to the terms of the Contract or the work or to the Plans and Specifications.

Said Principal and Surety hereby for themselves and their families waive and renounce the benefit of all homestead and exemption laws of this or any other state or the laws of the United States, as against any claim or judgment based upon the obligations of this bond.

It is agreed that this bond is executed pursuant to and in accordance with the provisions of the Idaho Statutes, and is intended to be and shall be construed to be a bond on compliance with the requirements thereof, except and to the extent that this bond provides Owner with greater or additional rights than those set forth in the Idaho Statutes. The payment bond required to exempt an Owner under this part shall be furnished by the Contractor in at least the amount of the original contract price before commencing the construction of the improvement under the direct contract. The bond shall be executed as surety by a surety insurer authorized to do business in this state and shall be conditioned that the Contractor shall promptly make payments for labor, services, and material to all lienors under the Contractor's direct contract. Any form of bond given by a Contractor conditioned to pay for labor, services, and material used to improve real property shall be deemed to include the condition of this subsection.
IN WITNESS WHEREOF, said Principal and Surety have thereunto affixed their hands and seals on this ______ day of ____________, 20____, either in person or by agents fully authorized.

As to Principal:

Signed, sealed and delivered in the presence of:

__________________________________________
Principal

Witness

__________________________________________
Notary Public

State of ____________________________

County of ____________________________

As to Surety:

Signed, sealed and delivered in the presence of:

__________________________________________
Surety

Witness

__________________________________________
Notary Public

State of ____________________________

County of ____________________________

Approved as to form:

__________________________________________
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE **CONTRACTOR** of the State of **CONTRACTOR STATE** and County of **CONTRACTOR COUNTY** hereinafter, known as the Principal, and ____________, a corporation chartered and existing under the laws of the State of ________________, and duly authorized to business in the State of Idaho as Surety, are held and firmly bound unto the City of Boise, Idaho hereinafter known as the Owner, in the penal sum of **PROJECT COST** being 100% of the contract price to be paid to the Owner, for the use and benefit of all persons doing work or furnishing skill, tools, machinery or materials, or subcontracting under or for the purpose of the hereinafter named contract, for which payment, well and truly to be made, we hereby bind ourselves, our heirs, executors, administrators, successors and assignees, jointly and severally, by these presents.

This obligation is, however, subject to the following conditions:

The above bound Principal has entered into a contract with the Owner under which agrees to furnish all the labor and material and do all work necessary to construct all improvements described in these contract documents under certain terms, conditions, and stipulations and in accordance with the plans and specifications for the project, which are hereto attached and made a part of this obligation.

NOW should the above named Principal and all subcontractors, if any, to whom any portion of the work provided for in the attached contract is sublet and all assignees of the said Principal and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, materials, or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension of or addition to said contract, and for the payment of reasonable attorneys fees, incurred by the claimant or claimants in suits on said bond, then the above obligation shall be void; otherwise, to remain in full force and effect.

And the Surety to this bond, for value received agrees that no change, extensions of time, alterations or additions to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations or additions to the terms of the Contract or the work to the Plans and Specifications.

Said Principal and Surety hereby for themselves and their families waive and renounce the benefit of all homestead and exemption laws of this or any other state or the laws of the United States, as against any claim or judgment based upon the obligations of this bond.

It is agreed that this bond is executed pursuant to and in accordance with the provisions of the Idaho Statutes, and is intended to be and shall be construed to be a bond on compliance with the requirements thereof. The payment bond required to exempt an Owner under this part shall be furnished by the Contractor in at least the amount of the original contract price before commencing the construction of the improvement under the direct contract. The bond shall be executed as surety by a surety insurer authorized to do business in this state and shall be conditioned that the Contractor shall promptly make payments for labor, services, and material to all lienors under the Contractor’s direct contract. Any form of bond given by a Contractor conditioned to pay for labor, services, and material used to improve real property shall be deemed to include the condition of this subsection.
IN WITNESS WHEREOF, said Principal and Surety have thereunto affixed their hands and seals on this ______ day of ___________, 20_______, either in person or by agents fully authorized.

As to Principal:

Signed, sealed and delivered in the presence of:

________________________________________________
Principal

________________________________________________
Witness

________________________________________________
Notary Public

State of __________________________

County of __________________________

As to Surety:

Signed, sealed and delivered in the presence of:

________________________________________________
Surety

________________________________________________
Witness

________________________________________________
Notary Public

State of __________________________

County of __________________________

Approved as to form:

________________________________________________
Owner’s Attorney
FINAL RELEASE OF LIEN

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned, for and in consideration of the payment of the sum of _______________________________, paid by the City of Boise, Idaho hereinafter referred to as “Owner”, receipt of which is hereby acknowledged as total compensation for performance of the below-described Contract for Bid Schedule(s) __________, does hereby fully and completely discharge and release the Owner from and waives any and all debts, accounts, promises, damages, liens, encumbrances, causes of action, suits, bonds, judgments, claims and demands whatsoever, in law or in equity, which the undersigned ever had, now has or might hereafter have on account of labor performed, material furnished or services rendered, directly or indirectly, for the Contract between the parties dated __________, 20___, known as __________ except for those claims, disputes and other matters arising out of or relating to said Contract which have been raised by written demand in accordance with the Contract Documents prior to this date and identified by the Contractor as unsettled in the final Application for Payment and are either in arbitration or court litigation, as the case may be, in accordance with the Contract Documents.

The undersigned further covenants that subcontractors, suppliers, and material suppliers, and any or all other persons supplying materials, supplies, service or labor used directly or indirectly in the prosecution of the work provided for in the Contract, have been paid in full for all work under this contract.

The undersigned agrees to maintain in full force and effect the provisions of the Contract Documents respecting the guaranty against defective work, and any other special guaranties required by the Contract Documents, for the terms provided in the Contract Documents, which terms shall begin to run from the date specified in the Contract Documents.

The undersigned represents and warrants that the statements contained in the foregoing Release are true and correct.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this ___ day of ____________, 20___.

WITNESSES:

__________________________________________
CONTRACTOR

By: ________________________________

__________________________________________
STATE OF ________________________________ Title: ________________________________

COUNTY OF ________________________________

Sworn to and subscribed before me this ___ day of ____________, 20___.

(NOTARY SEAL)

__________________________________________
NOTARY PUBLIC
My Commission Expires:
THIS PAGE INTENTIONALLY BLANK
Davis-Bacon Wage Rates

General Decision Number: ID20200090 01/03/2020
Superseded General Decision Number: ID20190090
State: Idaho
Construction Type: Highway
County: Ada County in Idaho.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-60. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number 0  Publication Date 01/03/2020

ENGI0370-014 01/01/2019

POWER EQUIPMENT OPERATOR:
Bulldozer
GROUP 8............................................................ $ 31.27 12.05

ZONE PAY:
Zone 1 0 - 30 miles: free
Zone 2 30 - 60 miles: $30.00 per day
Zone 3 More than 60 miles: $35.00 per day.

If a project is located in more than one zone the lower zone rate shall apply

ZONES SHALL BE MEASURED FROM THE FOLLOWING U.S. POST OFFICES:

BOISE: 304 N. 8TH STREET
TWIN FALLS: 253 2ND AVE. WEST
POCATELLO: CLARK STREET
IDAHO FALLS: 875 NORTH CAPITAL AVE.

CITY OF BOISE  WR-1  WAGE RATES
BOISE AIRPORT  FEBRUARY 26, 2020
REALIGNMENT OF TAXIWAY H AND  ISSUED FOR BID
MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B
### Rates and Fringes

<table>
<thead>
<tr>
<th>Position</th>
<th>Labor Rate</th>
<th>Fringe Rate</th>
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</thead>
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<tr>
<td>LABORER: Pipelayer</td>
<td>$28.48</td>
<td>13.00</td>
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<tr>
<td>Zone Differential (Add to Zone 1 rates): Zone 2</td>
<td>$2.00</td>
<td></td>
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<td>BASE POINTS: Pasco</td>
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<tr>
<td>Zone 1: 0-45 radius miles from the main post office.</td>
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<tr>
<td>Zone 2: 45 radius miles and over from the main post office</td>
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<td>CARPENTER (Form Work Only)</td>
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<td>CARPENTER, Excludes Form Work</td>
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</tr>
<tr>
<td>Painter</td>
<td>$25.47</td>
<td>9.52</td>
</tr>
<tr>
<td>LABORER: Asphalt, Includes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raker, Shoveler, Spreader and Distributor</td>
<td>$21.57</td>
<td>8.61</td>
</tr>
<tr>
<td>LABORER: Common or General</td>
<td>$17.31</td>
<td>4.66</td>
</tr>
<tr>
<td>LABORER: Grade Checker</td>
<td>$15.95</td>
<td>3.86</td>
</tr>
<tr>
<td>LABORER: Mason Tender - Cement/Concrete</td>
<td>$15.50</td>
<td>5.41</td>
</tr>
<tr>
<td>OPERATOR: Backhoe/Excavator/Trackhoe</td>
<td>$20.82</td>
<td>5.88</td>
</tr>
<tr>
<td>OPERATOR: Bobcat/Skid Steer/Skid Loader</td>
<td>$21.15</td>
<td>8.20</td>
</tr>
<tr>
<td>OPERATOR: Broom/Sweeper</td>
<td>$19.58</td>
<td>6.87</td>
</tr>
<tr>
<td>OPERATOR: Crane</td>
<td>$23.34</td>
<td>9.45</td>
</tr>
<tr>
<td>OPERATOR: Forklift</td>
<td>$23.13</td>
<td>9.17</td>
</tr>
<tr>
<td>OPERATOR: Grader/Blade</td>
<td>$22.36</td>
<td>6.26</td>
</tr>
<tr>
<td>OPERATOR: Loader</td>
<td>$23.45</td>
<td>6.62</td>
</tr>
<tr>
<td>OPERATOR: Mechanic</td>
<td>$23.55</td>
<td>8.54</td>
</tr>
</tbody>
</table>
### WAGE RATES

<table>
<thead>
<tr>
<th>Classification</th>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATOR: Oiler</td>
<td>$22.51</td>
<td>5.83</td>
</tr>
<tr>
<td>OPERATOR: Paver (Asphalt, Aggregate, and Concrete)</td>
<td>$20.46</td>
<td>3.86</td>
</tr>
<tr>
<td>OPERATOR: Roller (Subgrade)</td>
<td>$19.99</td>
<td>7.99</td>
</tr>
<tr>
<td>OPERATOR: Roller</td>
<td>$19.94</td>
<td>6.46</td>
</tr>
<tr>
<td>OPERATOR: Rotomill</td>
<td>$28.05</td>
<td>10.00</td>
</tr>
<tr>
<td>OPERATOR: Screed</td>
<td>$20.52</td>
<td>6.77</td>
</tr>
<tr>
<td>TRAFFIC CONTROL: Flagger</td>
<td>$14.02</td>
<td>4.66</td>
</tr>
<tr>
<td>TRAFFIC CONTROL: Laborer-Cones/Barricades/Barrels - Setter/Mover/Sweeper</td>
<td>$16.17</td>
<td>4.66</td>
</tr>
<tr>
<td>TRUCK DRIVER: Dump Truck</td>
<td>$20.56</td>
<td>10.35</td>
</tr>
<tr>
<td>TRUCK DRIVER: Lowboy Truck</td>
<td>$26.61</td>
<td>13.21</td>
</tr>
<tr>
<td>TRUCK DRIVER: Oil Distributor Truck</td>
<td>$23.93</td>
<td>11.27</td>
</tr>
<tr>
<td>TRUCK DRIVER: Water Truck</td>
<td>$22.33</td>
<td>9.40</td>
</tr>
</tbody>
</table>

---

**WELDERS** - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of 'identifiers' that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).
Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.
With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION
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General Contract Provisions

Section 10 Definition of Terms

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

<table>
<thead>
<tr>
<th>Paragraph Number</th>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-01</td>
<td>AASHTO</td>
<td>The American Association of State Highway and Transportation Officials.</td>
</tr>
<tr>
<td>10-02</td>
<td>Access Road</td>
<td>The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.</td>
</tr>
<tr>
<td>10-03</td>
<td>Advertisement</td>
<td>A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.</td>
</tr>
<tr>
<td>10-04</td>
<td>Airport</td>
<td>Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport.</td>
</tr>
<tr>
<td>10-05</td>
<td>Airport Improvement Program (AIP)</td>
<td>A grant-in-aid program, administered by the Federal Aviation Administration (FAA).</td>
</tr>
<tr>
<td>10-06</td>
<td>Air Operations Area (AOA)</td>
<td>The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.</td>
</tr>
<tr>
<td>10-07</td>
<td>Apron</td>
<td>Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.</td>
</tr>
<tr>
<td>10-09</td>
<td>Award</td>
<td>The Owner's notice to the successful bidder of the acceptance of the submitted bid.</td>
</tr>
<tr>
<td>Paragraph Number</td>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------</td>
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<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10-10</td>
<td>Bidder</td>
<td>Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.</td>
</tr>
<tr>
<td>10-11</td>
<td>Building Area</td>
<td>An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.</td>
</tr>
<tr>
<td>10-12</td>
<td>Calendar Day</td>
<td>Every day shown on the calendar.</td>
</tr>
<tr>
<td>10-13</td>
<td>Certificate of Analysis (COA)</td>
<td>The COA is the manufacturer’s Certificate of Compliance (COC) including all applicable test results required by the specifications.</td>
</tr>
<tr>
<td>10-14</td>
<td>Certificate of Compliance (COC)</td>
<td>The manufacturer’s certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer’s authorized representative.</td>
</tr>
<tr>
<td>10-15</td>
<td>Change Order</td>
<td>A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.</td>
</tr>
<tr>
<td>10-16</td>
<td>Contract</td>
<td>A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment. The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.</td>
</tr>
<tr>
<td>10-17</td>
<td>Contract Item (Pay Item)</td>
<td>A specific unit of work for which a price is provided in the contract.</td>
</tr>
<tr>
<td>10-18</td>
<td>Contract Time</td>
<td>The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.</td>
</tr>
</tbody>
</table>

CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

GENERAL PROVISIONS
FEBRUARY 26, 2020
ISSUED FOR BID

Attachment: FB 20-207 Specifications (E) (RES-153-20 ; FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife
<table>
<thead>
<tr>
<th>Paragraph Number</th>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-19</td>
<td>Contractor</td>
<td>The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.</td>
</tr>
<tr>
<td>10-20</td>
<td>Contractors Quality Control (QC) Facilities</td>
<td>The Contractor’s QC facilities in accordance with the Contractor Quality Control Program (CQCP).</td>
</tr>
<tr>
<td>10-21</td>
<td>Contractor Quality Control Program (CQCP)</td>
<td>Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.</td>
</tr>
<tr>
<td>10-22</td>
<td>Control Strip</td>
<td>A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.</td>
</tr>
<tr>
<td>10-23</td>
<td>Construction Safety and Phasing Plan (CSPP)</td>
<td>The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator’s consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.</td>
</tr>
<tr>
<td>10-24</td>
<td>Drainage System</td>
<td>The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.</td>
</tr>
<tr>
<td>10-25</td>
<td>Engineer</td>
<td>The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.</td>
</tr>
<tr>
<td>10-26</td>
<td>Equipment</td>
<td>All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.</td>
</tr>
<tr>
<td>10-27</td>
<td>Extra Work</td>
<td>An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner’s Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.</td>
</tr>
<tr>
<td>Paragraph Number</td>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------</td>
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<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10-28</td>
<td>FAA</td>
<td>The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.</td>
</tr>
<tr>
<td>10-29</td>
<td>Federal Specifications</td>
<td>The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.</td>
</tr>
<tr>
<td>10-30</td>
<td>Force Account</td>
<td>a. Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Owner Force Account - Work performed for the project by the Owner’s employees.</td>
</tr>
<tr>
<td>10-31</td>
<td>Intention of Terms</td>
<td>Whenever, in these specifications or on the plans, the words “directed,” “required,” “permitted,” “ordered,” “designated,” “prescribed,” or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident Project Representative (RPR) is intended; and similarly, the words “approved,” “acceptable,” “satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner. Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.</td>
</tr>
<tr>
<td>10-32</td>
<td>Lighting</td>
<td>A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.</td>
</tr>
<tr>
<td>10-33</td>
<td>Major and Minor Contract Items</td>
<td>A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.</td>
</tr>
<tr>
<td>10-34</td>
<td>Materials</td>
<td>Any substance specified for use in the construction of the contract work.</td>
</tr>
<tr>
<td>Paragraph Number</td>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10-35</td>
<td>Modification of Standards (MOS)</td>
<td>Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.</td>
</tr>
<tr>
<td>10-36</td>
<td>Notice to Proceed (NTP)</td>
<td>A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.</td>
</tr>
<tr>
<td>10-37</td>
<td>Owner</td>
<td>The term “Owner” shall mean the party of the first part or the contracting agency signatory to the contract. Where the term “Owner” is capitalized in this document, it shall mean airport Sponsor only. The Owner for this project is Boise Airport.</td>
</tr>
<tr>
<td>10-38</td>
<td>Passenger Facility Charge (PFC)</td>
<td>Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.</td>
</tr>
<tr>
<td>10-39</td>
<td>Pavement Structure</td>
<td>The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.</td>
</tr>
<tr>
<td>10-40</td>
<td>Payment bond</td>
<td>The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.</td>
</tr>
<tr>
<td>10-41</td>
<td>Performance bond</td>
<td>The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.</td>
</tr>
<tr>
<td>10-42</td>
<td>Plans</td>
<td>The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as ‘contract drawings.’</td>
</tr>
<tr>
<td>10-43</td>
<td>Project</td>
<td>The agreed scope of work for accomplishing specific airport development with respect to a particular airport.</td>
</tr>
<tr>
<td>10-44</td>
<td>Proposal</td>
<td>The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.</td>
</tr>
<tr>
<td>Paragraph Number</td>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10-45</td>
<td>Proposal guaranty</td>
<td>The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.</td>
</tr>
<tr>
<td>10-46</td>
<td>Quality Assurance (QA)</td>
<td>Owner’s responsibility to assure that construction work completed complies with specifications for payment.</td>
</tr>
<tr>
<td>10-47</td>
<td>Quality Control (QC)</td>
<td>Contractor’s responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.</td>
</tr>
<tr>
<td>10-48</td>
<td>Quality Assurance (QA) Inspector</td>
<td>An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.</td>
</tr>
<tr>
<td>10-49</td>
<td>Quality Assurance (QA) Laboratory</td>
<td>The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer’s, Owner’s, or QA Laboratory.</td>
</tr>
<tr>
<td>10-50</td>
<td>Resident Project Representative (RPR)</td>
<td>The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.</td>
</tr>
<tr>
<td>10-51</td>
<td>Runway</td>
<td>The area on the airport prepared for the landing and takeoff of aircraft.</td>
</tr>
<tr>
<td>10-52</td>
<td>Runway Safety Area (RSA)</td>
<td>A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.</td>
</tr>
<tr>
<td>10-53</td>
<td>Safety Plan Compliance Document (SPCD)</td>
<td>Details how the Contractor will comply with the CSPP.</td>
</tr>
<tr>
<td>10-54</td>
<td>Specifications</td>
<td>A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.</td>
</tr>
<tr>
<td>Paragraph Number</td>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10-55</td>
<td>Sponsor</td>
<td>A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.</td>
</tr>
<tr>
<td>10-56</td>
<td>Structures</td>
<td>Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.</td>
</tr>
<tr>
<td>10-57</td>
<td>Subgrade</td>
<td>The soil that forms the pavement foundation.</td>
</tr>
<tr>
<td>10-58</td>
<td>Superintendent</td>
<td>The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.</td>
</tr>
<tr>
<td>10-59</td>
<td>Supplemental Agreement</td>
<td>A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%; (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.</td>
</tr>
<tr>
<td>10-60</td>
<td>Surety</td>
<td>The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.</td>
</tr>
<tr>
<td>10-61</td>
<td>Taxilane</td>
<td>A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.</td>
</tr>
<tr>
<td>10-62</td>
<td>Taxiway</td>
<td>The portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport’s runways, aircraft parking areas, and terminal areas.</td>
</tr>
<tr>
<td>10-63</td>
<td>Taxiway/Taxilane Safety Area (TSA)</td>
<td>A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.</td>
</tr>
<tr>
<td>Paragraph Number</td>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10-64</td>
<td>Work</td>
<td>The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor’s performance of all duties and obligations imposed by the contract, plans, and specifications.</td>
</tr>
<tr>
<td>10-65</td>
<td>Working day</td>
<td>A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor’s control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor’s forces engage in regular work will be considered as working days.</td>
</tr>
</tbody>
</table>

END OF SECTION 10
Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders). See Invitation to Bid for advertisement information.

20-02 Qualification of bidders. Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

20-03 Contents of proposal forms. The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 Irregular proposals.

Mobilization is limited to 10 percent of the total project cost.

A prebid conference is required on this project to discuss as a minimum, the following items: material requirements; submittals; Quality Control/Quality Assurance requirements; the construction safety and phasing plan including airport access and staging areas; and unique airfield paving construction requirements. See Invitation to Bid for date, time, and location of pre-bid conference.

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

   a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

   b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

   c. Documented record of Contractor default under previous contracts with the Owner.

   d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful
calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

**20-06 Examination of plans, specifications, and site.** The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner’s design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from their own examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

**20-07 Preparation of proposal.** The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

**20-08 Responsive and responsible bidder.** A responsive bid conforms to all significant terms and conditions contained in the Owner’s invitation for bid. It is the Owner’s responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

**20-09 Irregular proposals.** Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner’s form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

d. If the proposal contains unit prices that are obviously unbalanced.
e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder’s request for withdrawal is received by the Owner in writing or by email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in “default” for any reason specified in paragraph 20-04, Issuance of Proposal Forms, of this section.

20-15 Discrepancies and Omissions. A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner’s Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner’s Engineer a written request for interpretation no later than 7 days prior to bid opening.

Any interpretation of the project bid documents by the Owner’s Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

END OF SECTION 20
Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder’s proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder’s proposal for any of the following reasons:

a. If the proposal is irregular as specified in Section 20, paragraph 20-09, Irregular Proposals.

b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, Disqualification of Bidders.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner’s best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within 120 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsive bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price for the Federally funded portions (Phases 1 through 3) of work awarded.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 Approval of Contract.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the paragraph 30-01, Consideration of Proposals. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder’s proposal guaranty will be returned. The successful bidder’s proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in paragraph 30-05, Requirements of Contract Bonds.

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor’s performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, Requirements of Contract Bonds, of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance
with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner’s approval to be bound by the successful bidder’s proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, Execution of Contract, of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Owner.

END OF SECTION 30
Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner’s Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, Compensation for Altered Quantities.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement.

Supplemental agreements shall also require consent of the Contractor’s surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

40-03 Omitted items. The Owner, the Owner’s Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, Payment for Omitted Items.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR’s opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner’s best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, Payment for Extra Work. Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, Supplemental Agreement.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available...
to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, Limitation of Operations. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, Contractor's Responsibility for Utility Service and Facilities of Others.

b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, Rights in and Use of Materials Found in the Work, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

a. Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,
b. Remove such material from the site, upon written approval of the RPR; or

c. Use such material for the Contractor’s own temporary construction on site; or,

d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR’s approval in advance of such use.

Should the RPR approve the Contractor’s request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor’s exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Owner.

END OF SECTION 40
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Section 50 Control of Work

50-01 Authority of the Resident Project Representative (RPR). The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR’s written orders.

The term “reasonably close conformity” shall not be construed as waiving the Contractor’s responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR’s responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor’s execution of the work, when, in the RPR’s opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term “reasonably close conformity” is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor’s means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within
standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

50-04 List of Special Provisions. Not used.

50-05 Cooperation of Contractor. The Contractor shall be supplied with five hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

50-06 Cooperation between Contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-07 Construction layout and stakes. The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): Hard Copy and Electronic (PDF of Filed Notes, AutoCAD 2019 of survey data).
Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

50-08 Authority and duties of Quality Assurance (QA) inspectors. QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor’s expense.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor’s expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, Conformity with Plans and Specifications.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, Contractor’s Responsibility for Work.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor’s expense.
Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor’s equipment and personnel.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, Maintenance during Construction, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR’s notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be recovered as a liquidated damage against the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.
50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor’s right to dispute final payment based on differences in measurements or computations.

END OF SECTION 50
CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND
MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

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Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR’s option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, Airport Lighting Equipment Certification Program and Addendum, that is in effect on the date of advertisement.

60-02 Samples, tests, and cited specifications. All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor’s risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor’s expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor’s representative at their request after review and approval of the RPR.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP).

60-03 Certification of compliance/analysis (COC/COA). The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer’s COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer’s COC and includes all applicable test results.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.
The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by “brand name or equal” and the Contractor elects to furnish the specified “or equal,” the Contractor shall be required to furnish the manufacturer’s certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed “or equal” is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.

b. The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer/ Resident Project Representative (RPR) field office. An Engineer/RPR field office is not required.

60-06 Storage of materials. Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor’s plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Owner’s permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.
Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60
CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

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GENERAL PROVISIONS
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ISSUED FOR BID

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Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor’s employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) must be shown on the plans and is indicated as follows: none. Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work or for any delay to the work resulting from such authorized work.

70-05 Federal Participation. The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor’s worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.
70-07 Public convenience and safety. The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, Maintenance of Traffic, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, Limitation of Operations.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

70-08 Construction Safety and Phasing Plan (CSPP). The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is included in the Contract Documents.

70-09 Use of explosives. The use of explosives is not permitted on this project.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the “Workmen’s Compensation Act,” or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.
70-13 Opening sections of the work to traffic. If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Refer to the various Phasing Plan sheet of the drawings for phasing.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, Partial Acceptance.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP. Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor’s responsibility for work. Until the RPR’s final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, Partial Acceptance, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor’s responsibility for utility service and facilities of others. As provided in paragraph 70-04, Restoration of Surfaces Disturbed by Others, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.
It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to “The Person to Contact” as provided in this paragraph and paragraph 70-04, Restoration of Surfaces Disturbed By Others. A copy of each notification shall be given to the RPR.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor’s opinion, the Owner’s assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner’s “Person to Contact” no later than two normal business days prior to the Contractor’s commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor’s failure to give the two days’ notice shall be cause for the Owner to suspend the Contractor’s operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor’s operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor’s operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner’s rights under any warranty or guaranty.
70-19 Environmental protection. The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the RPR. The RPR will immediately investigate the Contractor’s finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor’s operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, Extra Work, and Section 90, paragraph 90-05, Payment for Extra Work. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, Determination and Extension of Contract Time.

70-21 Insurance Requirements. See Special Conditions Section 2 for insurance requirements.

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Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least 35 percent of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

The Contractor shall provide copies of all subcontracts to the RPR 14 days prior to being utilized on the project. As a minimum, the information shall include the following:

- Subcontractor’s legal company name.
- Subcontractor’s legal company address, including County name.
- Principal contact person’s name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

80-02 Notice to proceed (NTP). The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within 10 days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR’s review and acceptance at least 10 days prior to the start of work. The Contractor’s progress schedule, once accepted by the RPR, will represent the Contractor’s baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor’s performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR’s request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall
show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

**80-04 Limitation of operations.** The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least [48 hours] prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, Construction Safety and Phasing Plan (CSPP).

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor’s operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor’s operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

See phasing plans for construction within the AOA instructions.

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

**80-04.1 Operational safety on airport during construction.** All Contractors’ operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

**80-05 Character of workers, methods, and equipment.** The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.
Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR’s order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR will forward the Contractor’s claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the contract, plans, or specifications.

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.
80-07 Determination and extension of contract time. The number of calendar days or the number of working days shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

80-07.1 Contract time based on working days. Contract time based on working days shall be calculated weekly by the Resident Project Representative (RPR). The RPR will furnish the Contractor a copy of their weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved Change Orders or Supplemental Agreements covering Extra Work).

The weekly statement of contract time charged is based on the following considerations:

(1) Time will be charged for days on which the Contractor could proceed with scheduled work under construction at the time for at least six (6) hours with the normal work force employed on such items. When normal work force is a double-shift, use 12 hours; and when the normal work force is on a triple-shift, use 18 hours. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the scheduled work items under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

(2) The RPR will not make charges against the contract time prior to the effective date of the notice to proceed.

(3) The RPR will begin charges against the contract time on the first working day after the effective date of the notice to proceed.

(4) The RPR will not make charges against the contract time after the date of final acceptance as defined in Section 50, paragraph 50-14, Final Acceptance.

(5) The Contractor will be allowed one (1) week in which to file a written protest setting forth their own objections to the RPR’s weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the Section 20, paragraph 20-05, Interpretation of Estimated Proposal Quantities. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

Contract time based on calendar days. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the Notice to Proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner’s orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, Determination and Extension of Contract Time) the sum specified in the
contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Liquidated Damages Cost</th>
<th>Allowed Construction Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>$2,500/day</td>
<td>55 Calendar Days</td>
</tr>
<tr>
<td>1B</td>
<td>$2,500/day</td>
<td>35 Calendar Days</td>
</tr>
<tr>
<td>1C</td>
<td>$2,500/day</td>
<td>15 Calendar Days</td>
</tr>
<tr>
<td>2A</td>
<td>$2,500/day</td>
<td>3 Calendar Days</td>
</tr>
<tr>
<td>2B</td>
<td>$2,500/day</td>
<td>7 Calendar Days</td>
</tr>
<tr>
<td>3</td>
<td>$2,500/day</td>
<td>30 Calendar Days</td>
</tr>
</tbody>
</table>

The maximum construction time allowed for Phases 1, 2, and 3 will be the sum of the time allowed for individual phases but not more than 90 days. Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract.

**80-09 Default and termination of contract.** The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the execution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor’s surety as to the reasons for considering the Contractor in default and the Owner’s intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor’s failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.
All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

END OF SECTION 80
Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

### Measurement and Payment Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Excavation and Embankment Volume</td>
<td>In computing volumes of excavation, the average end area method will be used unless otherwise specified.</td>
</tr>
<tr>
<td>Measurement and Proportion by Weight</td>
<td>The term “ton” will mean the short ton consisting of 2,000 pounds (907 km) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark.</td>
</tr>
<tr>
<td>Measurement by Volume</td>
<td>Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
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<tr>
<td>---------------------------</td>
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</tr>
<tr>
<td>capacity</td>
<td>and all loads shall be leveled when the vehicles arrive at the point of delivery.</td>
</tr>
<tr>
<td>Asphalt Material</td>
<td>Asphalt materials will be measured by the gallon or ton. When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.</td>
</tr>
<tr>
<td>Cement</td>
<td>Cement will be measured by the ton or hundredweight.</td>
</tr>
<tr>
<td>Structure</td>
<td>Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.</td>
</tr>
<tr>
<td>Timber</td>
<td>Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.</td>
</tr>
<tr>
<td>Plates and Sheets</td>
<td>The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.</td>
</tr>
<tr>
<td>Miscellaneous Items</td>
<td>When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.</td>
</tr>
<tr>
<td>Scales</td>
<td>Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end. Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted. In the event inspection reveals the scales have been &quot;overweighing&quot; (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%.</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
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<tr>
<td>In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded.</td>
<td>Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.</td>
</tr>
<tr>
<td>Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.</td>
<td>All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.</td>
</tr>
<tr>
<td>Rental Equipment</td>
<td>Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 Payment for Extra Work.</td>
</tr>
<tr>
<td>Pay Quantities</td>
<td>When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.</td>
</tr>
</tbody>
</table>

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, No Waiver of Legal Rights.

When the “basis of payment” subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, Alteration of Work and Quantities, will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.
90-04 Payment for omitted items. As specified in Section 40, paragraph 40-03, *Omitted Items*, the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR’s order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR’s order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement herebefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR’s order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

a. From the total of the amount determined to be payable on a partial payment, 5 percent of such total amount will be deducted and retained by the Owner for protection of the Owner’s interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

(1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-03. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.

(2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

b. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Owner evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor’s work is satisfactorily completed. A subcontractor’s work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

c. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Owner’s discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all
It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, Acceptance and Final Payment.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the RPR at or on an approved site.

b. The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the RPR with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner’s payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

90-08 Payment of withheld funds. At the Contractor’s option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 Partial Payments, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner’s deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.
b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, Final Acceptance, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR’s final estimate or advise the RPR of the Contractor’s objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor’s receipt of the RPR’s final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR’s estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with Section 50, paragraph 50-16, Claims for Adjustment and Disputes.

After the Contractor has approved, or approved under protest, the RPR’s final estimate, and after the RPR’s receipt of the project closeout documentation required in paragraph 90-11, Contractor Final Project Documentation, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, Claims for Adjustments and Disputes, or under the provisions of this paragraph, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession.

c. The Contractor shall remedy at the Contractor’s expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor’s expense any damage to Owner real or personal property, when that damage is the result of the Contractor’s failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor’s warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor’s expense.


g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner’s rights with respect to latent defects, gross mistakes, or fraud.

90-11 Contractor Final Project Documentation. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor’s final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with Section 40, paragraph 40-08, Final Cleanup.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual(s).


l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90
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SPECIAL CONDITIONS
SECTION 1
PROJECT INFORMATION

1. CONTRACT PROVISIONS. The General Provisions and these Special Conditions are applicable to all divisions and sections of the Contract Documents and Specifications. It shall be the Contractor's responsibility to so inform all parties who should be bound or influenced thereby.

In the event there are discrepancies between the technical specifications, general provisions, general conditions and the special conditions, the interpretation most advantageous to the Owner shall apply.

2. DESCRIPTION OF WORK. The proposed Work includes the following:

Schedule I (Federal) project work includes: Reconstruct Taxiway H to be perpendicular with Runway 10R-28L, mill and overlay Taxiways J and B. Schedule II (Non-Federal) project work includes: Fill infield areas along Taxiway H with crushed aggregate, construct two (2) 72 square yard Portland Cement concrete pads at the UPS West Ramp.

3. LOCATION OF THE WORK. The site of the proposed Work is at the Boise Airport, Boise, Idaho. The physical address of the airport is 3201 Airport Way, Boise, Idaho 83705-5097.

4. DEFINITIONS. The following terms when used in the Contract Documents shall mean the following:

A. ADDENDA. Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

B. BID. The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work and services to be performed.

C. DAY. Unless otherwise defined shall mean “calendar” day.

D. DRAWINGS. The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by the Engineer and are referred to in the Contract Documents.


F. FIELD ORDER. A written order issued by the Engineer which orders minor changes in the work consistent with the intent of the Contract Documents but which does not involve a change in the Contract Price or the Contract Time.

The Engineer may authorize minor changes in the work not involving an adjustment in the contract price or the contract time, which are consistent with the overall intent of the Contract Documents. These may be accomplished by a field order and shall be binding on the Owner, and also on the Contractor who shall perform the change promptly. If the Contractor believes that a field order justifies an increase in the contract price or contract time, the Contractor shall make a claim under Section 50, Subsection 50-16, Claims for Adjustment and Disputes of the General Provisions before doing the Work.

G. FURNISH or INSTALL or PROVIDE or SUPPLY. Unless specifically limited in the context, the word “Furnish” or the word "Install" or the word “Provide” or the word “Supply” or any combination or similar directive or usage thereof, shall mean FURNISHING AND INCORPORATION IN THE WORK including all necessary labor, materials, equipment, and anything necessary to perform the work indicated.
**H. GOOD REPAIR.** Good repair shall be construed to mean any defect, functional or structural deterioration (except that from ordinary and reasonable use) which appreciably reduces the effectiveness or efficiency of the work or improvement for the purpose intended, or any serious departure from the standards of original construction described in the Contract Documents, shall be remedied by the Contractor. Such remedy will be made without further cost to the Owner, including in part, all damages caused by such defect, deficiency, deterioration or departure, and by its repair, replacement or correction.

**I. MAY.** Permissive.

**J. PERMITS.** Permits include City of Boise Electrical, Grading and Drainage. Contractor to pay for all permit costs and include these costs in Mobilization.

**K. REFERENCE TO TRADE OR SUBCONTRACTORS.** When only one principal contract exists for all work covered by the Contract Documents, reference to trade or subcontractors in the Contract Documents shall not create any contractual relationship between the Owner and any trade or subcontractor, with whom the principal contractor may subcontract.

**L. SAMPLES.** Samples are physical examples furnished or constructed by the Contractor to illustrate materials, equipment, workmanship or finishes, and to establish standards by which the work will be judged.

**M. "SHALL" IMPLIED.** In the interest of conciseness, some sentences, statements, and clauses used in the specifications exclude any form of the verb "shall" normally expressed in a verb phrase with verbs such as "furnish", "install", "provide", "perform", "construct", "erect", "comply", "apply", "submit", or similar "verb", but any such sentences, statements, and clauses shall be interpreted to include the applicable form of the phrase "The Contractor shall" and the requirements described therein shall be interpreted as mandatory elements of the Contract.

**N. SHALL.** Mandatory.

**O. SUBCONTRACTOR.** Party supplying labor and material or any labor for work at the site of the project for, and under separate contract or agreement with the Contractor. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner and any subcontractor.

**P. SUBSTANTIAL COMPLETION.** When the work is sufficiently complete so it may be safely, conveniently and beneficially utilized by the Owner for all of the purposes for which it was intended.

**Q. WILL.** Mandatory.

**R. SEDIMENT.** Soil and other debris that have eroded and have been transported by runoff water or wind.

**S. SOLID WASTES.** Rubbish, debris, and other discarded solid materials, except hazardous waste as defined in paragraph entitled, "Hazardous Waste," resulting from industrial, commercial, and agricultural operations and from community activities.

**T. RUBBISH.** Combustible and noncombustible wastes including paper, boxes, glass, crockery, metal, lumber, cans, and bones.

**U. DEBRIS.** Combustible and noncombustible wastes such as ashes and waste materials resulting from construction or maintenance and repair work, leaves, and tree trimmings.

**V. CHEMICAL WASTES.** Salts, acids, alkalies, herbicides, pesticides, and organic chemicals.
W. SEWAGE. Waste characterized as domestic sanitary sewage.

X. GARBAGE. Refuse and scraps resulting from consumption of food.

Y. HAZARDOUS WASTES. Hazardous substances as defined in 40 CFR 261 or as defined by applicable state and local regulations.

Z. OILY WASTES. Petroleum products and bituminous materials.

AA. HAZARDOUS MATERIALS. As defined in DOT Regulation 49 CFR 171 and listed in CFR 172.

BB. HAZARDOUS SUBSTANCES. As defined in EPA PL 96-510.

5. APPLICABLE DRAWINGS. The drawings applicable to this project are listed in the Index of Drawings as included herein.

6. PROPOSAL REQUIREMENTS. In addition to those herein before described items to be submitted with the Bidder's Proposal, the bidder shall submit, with his proposal, a list of all subcontractors the bidder proposes to use on the work of this Contract.

After the Owner accepts the bidder's proposal and such bidder is awarded a Contract, the successful bidder may not substitute a subcontractor listed in the proposal without the prior written approval of the Owner. Such approval shall be obtained at least ten calendar days prior to the date scheduled for that subcontractor to begin work.

7. ACCESS TO THE WORK. Access to the work shall be via the access routes designated on the Contract Layout Plan. The Contractor shall identify access routes with suitable signs, barricades and similar equipment. The entire access route and construction site shall be kept free and clean of all debris at all times and maintained in good repair by the Contractor. All damage to the access route caused by the actions of the Contractor or his agents shall be immediately repaired to the satisfaction of the Owner.

No separate payment will be made for complying with the requirements of this paragraph "ACCESS TO THE WORK." No other access to the work site will be permitted without written approval by the Owner and Engineer. Contractor's vehicles and equipment, including vehicles and equipment of the subcontractors and others coming under the Contractor's control, will not be permitted to traverse other airfield areas or pavements without written approval of the Owner and Engineer. Contractor's vehicles, equipment and materials may be stored in the area designated on the Plans. Upon completion of the work, the storage area shall be cleaned up and returned to its original condition to the satisfaction of the Owner. No separate payment will be made for cleanup and restoration of the storage area. Personal services, such as canteen trucks, will not be permitted beyond this area and drivers of vehicles being operated beyond this area shall be subject to loss of permission to enter the construction site.

8. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

A. Shop drawings are drawings, diagrams, schedules and other data specially prepared for the work by the Contractor or any subcontractor, manufacturer, supplier or distributor to illustrate some portion of the work.

B. Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams or other information furnished by the Contractor to illustrate a material, product or system for some portion of the work.

C. Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the work will be judged.
D. The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the work or in the work of the Owner or any separate contractor, all shop drawings, product data and samples required by the Contract Documents.

E. By approving and submitting shop drawings, product data and samples, the Contractor represents that he has determined and verified all materials, field measurements and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the work and of the Contract Documents.

F. The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Engineer's approval of shop drawings, product data or samples unless the Contractor has specifically informed the Engineer in writing of such deviation at the time of submission and the Engineer has given written approval of the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the shop drawings, product data or samples by the Engineer's approval thereof.

G. The Contractor shall direct specific attention, in writing or on resubmitted shop drawings, product data or samples to revisions other than those requested by the Engineer on previous submittals.

H. No portion of the work requiring submission of a shop drawing, product data or sample shall be commenced until the submittals have been approved by the Engineer as provided in the General Provisions, Section 50. All such portions of the work shall be in accordance with approved submittals.

I. The Contractor shall not reproduce the Engineer's project drawings for shop drawing use without prior written approval of the Engineer.

J. The Contractor shall submit six (6) copies, or at Engineer's option, one reproducible copy and one print of all shop drawings required for the work of the various trades unless greater quantities are specifically requested for certain equipment. Of these, three copies, or the reproducible copy, will be annotated as appropriate and returned to the Contractor with appropriate action indicated. By agreement with the Engineer, the Contractor may submit more than the required number of copies. Receipt of less than the required number of copies will be cause for withholding the shop drawings, product data or samples from being checked until receipt of the necessary additional copies. Shop drawings shall be forwarded to RS&H, Inc., 5215 Wiley Post Way, Suite 510, Salt Lake City, UT 84416. The Contractor's letter of submittal must conform to the typical Contractor's "Transmittal Letter" which is available from the Engineer. The quantity of transmittal letters to be submitted shall be equal to the number of sets of drawings, product data or samples being submitted plus one. Each drawing or part of the drawings, product data or samples shall be listed separately on the letter and identified as indicated thereon. Failure to do this will cause rejection of the submittal. The Engineer will return to the Contractor the same transmittal letter, with the shop drawings, product data or samples disposition noted thereon along with the shop drawings, product data or samples when the review is completed. The Contractor shall forward separate transmittal letters for submitting each group of shop drawings, product data or samples common to a specification section.

K. In checking shop drawings, product data or samples prior to submittal, the Contractor is requested to note corrections or comments on the shop drawings, product data or samples in green pen.

L. Drawings returned to the Contractor will be stamped "Approved," "Approved as Noted," "Returned for Corrections," or "Not Approved." Drawings stamped "Approved as Noted" need not be returned for further approval if the notations are acceptable to the Contractor and subcontractors. Drawings stamped "Returned for Corrections" or "Not Approved" shall require new submission. Comments and corrections by the Engineer will be made in red pen on blue or black line prints.

M. Samples shall be submitted to the attention of RS&H, Inc., 5215 Wiley Post Way, Suite 510, Salt Lake City, UT 84416 accompanied with the same transmittal letter prescribed for shop drawings.
Checking by Contractor of product data and samples before transmittal is required the same as for shop drawings.

9. PROJECT DOCUMENTATION.

A. Project Drawings: The successful Contractor will be furnished, at no charge, four (4) copies of the Drawings and Specifications. Additional copies may be purchased at actual cost of reproduction.

A field set of Plans and Specifications shall remain on the job site at all times and shall be available at all times to the Engineer.

The Contractor shall immediately include plainly and conspicuously on the field set of drawings, and at appropriate paragraphs in the specifications, all changes or corrections made by addenda, field orders and change orders as they are issued.

Approved copies of all shop drawings, product data, samples and other submittals are to be kept on the job site at all times and shall be available at all times to the Engineer.

Changes and deviations from the existing conditions shall be submitted in writing for approval prior to installation. In no case shall any unspecified equipment or materials be installed without prior approval of the Engineer.

B. Record Documents:

(1) Definition: Record documents are defined to include those documents or copies relating directly to performance of the work, which the Contractor is required to prepare or maintain for the Owner's records, recording the work as actually performed. In particular, record documents show changes in the work in relation to the way in which shown and specified by original Contract Documents; and show additional information of value to the Owner's records, but not indicated by original Contract Documents. Record documents include newly prepared drawings (if any are specified), marked-up copies of contract drawings, shop drawings, specifications, addenda, field orders, change orders, marked-up product data submittals, record samples, field records for variable and concealed conditions such as excavations and foundations, and miscellaneous record information on work which is otherwise recorded only schematically or not at all.

(2) Record Drawings: The Contractor shall maintain a set of record drawings at the job site.

The record drawings shall be kept legible and current and shall be available for inspection at all times by the Engineer. The Contractor shall show all changes or work added on these record drawings in a contrasting color.

(a) Mark-Up Procedure: During progress of the work, maintain a blue-line or black-line set of contract drawings and shop drawings, with mark-up of actual installations which vary substantially from the work as originally shown. Mark whatever drawing is most capable of showing actual physical condition, fully and accurately. Where shop drawings are marked up, mark cross-reference on contract drawings at corresponding location. Mark with erasable colored pencil, using separate colors where feasible to distinguish between changes for different categories of Work at same general location. Mark-up important additional information that was either shown schematically or omitted from original drawings. Give particular attention to information on work concealed, which would be difficult to identify or measure and record at a later date. Note alternate numbers, field orders or change order numbers and similar identification. Require each person preparing mark-ups to initial and date mark-ups and indicate name of firm. Label each sheet “PROJECT RECORD” in 1-1/2-inch high letters.

In showing changes in the work, use the same legends as used on the original drawings. Indicate exact locations by dimensions and exact elevations by job datum. Give dimensions from a permanent point.
Preparation of Transparencies: In preparation for Certification of Substantial Completion on last major portion of the work, review completed mark-up of record drawings and shop drawings with Engineer. The Engineer will then proceed with preparation of a full set of corrected transparencies for contract drawings. The Engineer will date each updated drawing and label each sheet "RECORD DRAWING" in 1-1/2-inch high letters. Printing as required herein is the responsibility of the Engineer.

Copies, Distribution: Upon completion of transparency record drawings, the Engineer shall prepare three blue-line or black-line prints of each drawing, regardless of whether changes and additional information were recorded thereon. The Engineer shall then organize each of three copies into manageable sets, bind with durable paper cover sheets, and print suitable titles and dates. The mark-up set of prints maintained during the construction period shall be bound in the same manner. The Engineer shall also organize transparencies into sets matching print sets, place set in a durable tube-type drawing container (with end caps) and mark end cap of each with suitable identification. The Engineer will retain one copy set. At the completion of the project, the Engineer shall submit one set of transparencies, with changes noted thereon, to the Owner.

Record drawings shall contain the names, addresses and phone numbers of the Contractor and all subcontractors.

The Engineer shall be the sole judge of the acceptability of the record drawings. Receipt and acceptance of the record drawings is a prerequisite for Final Payment.

Record Specifications:

During the progress of the work, the Contractor shall maintain one copy of the specifications, including addenda, field orders, change orders and similar modifications issued in printed form during construction, marked-up variations (of substance) in actual work in comparison with text of specifications and modifications as issued at the jobsite. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation. Note related record drawing information and product data, where applicable. Upon completion of mark-up, the Contractor shall submit all data to the Engineer for the Owner’s records. Label front cover "PROJECT RECORD" in 1-1/2-inch high letters.

Where the record specifications is printed on one side of page only, mark variation on blank left-hand pages of the record specifications, facing printed right-hand pages containing original text affected by variation.

Record Product Data: During progress of the work, maintain one copy of each product data submittal, and mark-up significant variations in the actual work in comparison with submitted information. Include both variations in product as delivered to site, and variations from manufacturer’s instructions and recommendations for installation. Give particular attention to concealed products and portions of the work that cannot otherwise be readily discerned at a later date by direct observation. Note related field orders and change orders and mark-up of record drawings and specifications. Upon completion of mark-ups, submit complete set of product data submittal to the Engineer for the Owner’s records. Label each data submittal "PROJECT RECORD" in 1-1/2-inch high letters.

Record Sample Submittal: Immediately prior to date(s) of substantial completion, the Engineer and Owner’s authorized representatives will meet with the Contractor at the work site and will determine if any of the submitted samples maintained by the Contractor during progress of the work are to be transmitted to the Owner for record purposes. The Contractor shall comply with the Engineer’s instructions for packaging, identification marking and delivery to the Owner’s sample storage space. Dispose of other samples in a legal manner specified for disposal as surplus and waste materials, unless otherwise indicated by Engineer.
F. Miscellaneous Record Submittals: Refer to other sections of these specifications for requirements of miscellaneous recordkeeping and submittals in connection with actual performance of the work. Immediately prior to date(s) of substantial completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Engineer for the Owner’s records. Categories of requirements resulting in miscellaneous work records are recognized to include, but not be limited to, the following:

1. Required field records on excavations, foundations underground construction, wells and similar work.

2. Accurate survey showing locations and elevations of underground lines, including invert elevations of drainage piping, valves, tanks and manholes.

3. Surveys establishing lines and levels of buildings, where applicable.

4. Soil treatment certification.

5. Inspection and Test Reports: Where not processed as shop drawings or product data.

6. Concrete mix design record.

7. Asphaltic concrete mix design record.

8. Concrete block certification, where applicable.

G. Project Closeout: Closeout is hereby defined to include general requirements near end of contract time, in preparation for final acceptance, final payment, normal termination of Contract, occupancy by the Owner and similar actions evidencing completion of the work. Specific requirements for individual units or work are specified in other sections. Time of closeout is directly related to substantial completion, and therefore may be a single-time period for the entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. The time variation, if any, shall be applicable to other provisions of this section.

H. Prerequisites to Substantial Completion:

1. Prior to requesting the Engineer’s inspection for Certification of Substantial Completion, for either entire work or portions thereof, complete the following and list no exceptions in request.

   a. In progress payment request coincident with, or first following date claimed, show 100 percent completion for the portion of work claimed as “Substantially Completed,” or list incomplete items, value of incompletion and reasons for being incomplete.

   b. Include supporting documentation for completion as indicated in the Contract Documents.

   c. Submit statement showing accounting of changes to the Contract sum.

   d. Advise the Owner of pending insurance change-over requirements.

   e. Obtain and submit releases enabling Owner’s full and unrestricted use of the work and access to services and utilities, including, where required, occupancy permits, operating certificates and similar releases.

   f. Deliver tools, spare parts, extra stocks of materials and similar physical items to the Owner.
(g) Make final change-over of locks and transmit keys, where applicable, to the Owner, and advise the Owner's authorized representatives of change-over in security provisions.

(h) Complete start-up testing of systems, and instructions to the Owner's operating-maintenance personnel. Discontinue, or change over, and remove from project site any temporary facilities and services, along with construction tools and facilities, mock-ups and similar elements.

(2) Inspection Procedures: Upon receipt of the Contractor's request, the Engineer will proceed with the inspection or advise the Contractor of prerequisites not fulfilled. Following initial inspection, the Engineer will prepare the Certificate of Substantial Completion or advise the Contractor of work which must be performed prior to issuance of the certificate and repeat the inspection when requested and assured that work has been substantially completed. Results of completed inspection(s) will form initial "punch list" for Final Acceptance. If the Engineer performs more than one initial inspection and one follow-up inspection and it is determined that additional follow-up inspections are required, the cost of the Engineer’s time and travel expenses to perform such additional follow-up inspections shall be charged to the Contractor and the costs deducted from the Contractor’s earnings.

I. Prerequisites to Final Acceptance:

(1) Prior to requesting the Engineers’ final inspection for Certification of Final Acceptance as required by the General Provisions, the Contractor shall complete the following and list known exceptions in the request:

(a) Submit certified copy of the Engineer's final punch list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by the Engineer.

(b) Submit final meter readings for utilities, measured record of stored fuel, and similar data as of time of Substantial Completion or when Owner took possession of and responsibility for corresponding elements of the Work.

(c) Complete final cleaning up requirements, including touch-up of marred surfaces.

(d) Touch-up and otherwise repair and restore marred exposed finishes.

(2) Reinspection Procedures: Following Substantial Completion, the Contractor shall correct or remedy all punch list items to the satisfaction of the Engineer and Owner within a two (2)-week period after the date of Substantial Completion. If subsequent inspections are necessary after the two-week period in order to eliminate all deficiencies, the cost of all subsequent inspections with respect to the Owner's and Engineer's time and expenses shall be paid by the Contractor. When ready, the Contractor shall request in writing, a final reinspection of the work. Upon completion of reinspection, the Engineer will prepare Certificate of Final Acceptance or advise the Contractor of work not completed or obligations not fulfilled as required for Final Acceptance. If necessary, the above procedures will be repeated.

J. Prerequisites to Final Payment:

(1) Final Payment: Final Payment will be made after Final Acceptance of the project by the Engineer and Owner upon request by the Contractor on condition that the Contractor:

(a) Furnish properly executed and completed release of claims from all material men and subcontractors who have furnished materials or labor for the work and submit supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
(b) Furnish the Contractor's Affidavit of Release of Claims (2 copies) that all material, men, and subcontractors have been paid in full. In the event they have not been paid in full, the Owner shall retain a sufficient sum to pay them in full and at his option, may make direct payment to obtain complete releases of claim.

(c) Furnish Contractor's Final Release of Claim (2 copies).

(d) Furnish required sets of record drawings and maintenance and operating instructions of new mechanical equipment.

(e) Furnish guarantees signed by subcontractors, material suppliers and countersigned by the Contractor for operating equipment.

(f) Submit specific warranties, workmanship-maintenance bonds, maintenance agreements, final certifications and similar documents.

(g) Furnish a signed guarantee, in form acceptable to the Engineer and Owner agreeing to repair or replace, as decided by the Engineer, all work and materials that prove defective within one (1) year from the date of Final Acceptance, including restoration of all other Work damaged in making such repairs or replacements.

(h) Furnish consent of Surety to Final Payment.

(i) Submit final progress payment application, reflecting all final changes to contract quantities and sums.

(j) Submit evidence of final, continuing insurance coverage complying with insurance requirements.

(k) Certify that all social security, employment and all other taxes (city, state, federal government) have been paid.

(l) Provide receipt, as applicable, of affidavits certifying all labor standards of local, state or federal requirements have been complied with by the Contractor.

(m) Submit actual DBE participation percentages along with the names, addresses and phone numbers of all DBE subcontractors, material suppliers utilized in the work.

K. Record Document Submittals: Specific requirements for record documents are shown in Section 9, PROJECT DOCUMENTATION. Other requirements are indicated in the General Provisions. General submittal requirements are indicated in "Submittals" sections. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistant location; provide access to record documents for the Engineer's reference during normal working hours.

(1) Record Drawings: The Engineer shall organize record drawing sheets into manageable sets, bind with durable paper cover sheets and print suitable titles, dates and other identification on cover of each set.

(2) Record Specifications: Upon completion of mark-ups, submit to the Engineer for the Owner's records.

(3) Record Product Data: Upon completion of mark-ups, submit complete set to the Engineer for the Owner's records.
(4) Record Sample Submittal: Comply with the Engineer's instructions for packaging, identification marking and delivery to the Owner's sample storage space.

(5) Miscellaneous Record Submittals: Complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Engineer for the Owner's records.

(6) Maintenance Manuals: Complete, place in order, properly identify and submit to the Engineer for the Owner's records.

L. Closeout Procedures: General Operating and Maintenance Instructions: Arrange for each installer of work requiring continuing maintenance or operation to meet with the Owner's authorized representatives, at the work site, to provide basic instructions needed for proper operation and maintenance of the entire work. Include instructions by manufacturer's representatives where installers are not expert in the required procedures. Review maintenance manuals, record documentation, tools, spare parts and materials, lubricants, fuel, identification system, control sequences; hazards, cleaning and similar procedures and facilities. For operational equipment, demonstrate start-up, shut-down, emergency operations, noise and vibration adjustments, safety, economy, efficiency adjustments and similar operations. Review maintenance and operations in relation with application warranties, agreements to maintain bonds, and similar continuing commitments.

10. FINAL CLEANING.

A. Provide final cleaning of the work, at time indicated, consisting of cleaning each surface or unit of work to normal "clean" condition.

B. Removal of Protection: Remove temporary protection devices and facilities that were installed during course of the work to protect previous completed work during remainder of the construction period.

C. Compliances: Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at site, or bury debris or excess materials on the Owner's property, or discharge volatile or other harmful or dangerous materials into drainage systems; remove waste materials from site and dispose of in a lawful manner.

Where extra materials of value remaining after completion of associated work have become the Owner's property, dispose of these as directed by the Owner.

END OF SPECIAL CONDITIONS - SECTION 1
SPECIAL CONDITIONS

SECTION 2

INSURANCE REQUIREMENTS

1. INSURANCE AND INDEMNIFICATION

Before starting and until termination of work for, or on behalf of, the Owner, the Contractor shall procure and maintain insurance of the types and to the limits specified.

The term Owner as used in this section of the Contract is defined to mean the Boise Airport itself, any subsidiaries or affiliates, elected and appointed officials, employees, volunteers, representatives and agents.

With regard to the Contractor’s obligations for products and completed operations, the Contractor shall be responsible for providing and maintaining insurance and contractual agreements for a minimum period of at least three (3) years subsequent to the City’s acceptance of the products and/or services.

Insurance shall be issued by an insurer whose business reputation, financial stability and claims payment reputation is satisfactory to the Owner, for the Owner’s protection only. Unless otherwise agreed, the amounts, form and type of insurance shall conform to the following minimum requirements:

2. WORKER’S COMPENSATION

The Contractor shall purchase and maintain Worker’s Compensation Insurance Coverage for all Worker’s Compensation obligations whether legally required or not. Additionally, the policy, or separately obtained policy, must in include Employers Liability Coverage of at least $100,000 each person - accident, $100,000 each person - disease, $500,000 aggregate - disease or as required by the State of Idaho; whichever is greater.

3. COMMERCIAL GENERAL AUTOMOBILE AND UMBRELLA LIABILITY COVERAGES

The Contractor shall purchase coverage on forms no more restrictive than the latest editions of the Commercial General Liability and Business Auto policies filed by the Insurance Services Office. The Owner and Reynolds, Smith and Hills, Inc. shall be listed separately as Additional Insured and such coverage shall be at least as broad as that provided to the Named Insured under the policy for the terms and conditions of this contract. The Owner shall not be considered liable for premium payment, entitled to any premium return or dividend and shall not be considered a member of any mutual or reciprocal company. Minimum limits of $2,000,000 per occurrence, and per accident, combined single limit for liability must be provided, with umbrella insurance coverage making up any difference between the policy limits of underlying policies coverage and the total amount of coverage required. If the required limits of liability afforded should become impaired by reason of any claim, then the Contractor agrees to have the minimum limits reinstated under the policy.

Commercial General Liability coverage must be provided, including bodily injury and property damage liability for premises, operations, products and completed operations, contractual liability, independent contractors, and property damage resulting from collapse and underground (c, u) exposures. Broad Form Commercial General Liability coverage, or its equivalent shall provide at least, broad form contractual liability applicable to this specific contract, as well as personal injury liability and broad form property damage liability. The coverage shall be written on occurrence-type basis.

Business Auto Policy coverage must be provided, including bodily injury and property damage arising out of operation, maintenance or use of owned, non-owned and hired automobiles and employee non-ownership use.

Umbrella Liability Insurance coverage shall not be more restrictive than the underlying insurance policy coverages. The coverage shall be written on an occurrence-type basis.
4. CERTIFICATES OF INSURANCE
Required insurance shall be documented in the Certificates of Insurance which provides that the Owner shall be notified at least thirty (30) days in advance of cancellation, non-renewal or adverse change or restriction in coverage. Separate Certificates shall be issued to the Owner and to the Engineer naming each as an Additional Insured and this contract shall be listed. If required by the Owner, the Contractor shall furnish copies of the Contractor’s insurance policies, forms, endorsements, jackets and other items forming a part of, or relating to such policies. Certificates shall be on the Certificate of Insurance form equal to, as determined by the Owner on an ACORD 25 form. Any wording in a Certificate which would make notification of cancellation, adverse change or restriction in coverage to the Owner an option shall be deleted or crossed out by the insurance carrier or the insurance carrier’s agent. The Contractor shall replace any canceled, adversely changed, restricted or non-renewed policies with new policies acceptable to the Owner and shall file with the Owner Certificates of Insurance under the new policies prior to the effective date of such cancellation, adverse change or restriction. If any policy is not timely replaced, in a manner acceptable to the Owner, the Contractor shall, upon instructions of the Owner, cease all operations under the contract until directed by the Owner, in writing, to resume operations. The “Certificate Holder” address should read: The City of Boise, Idaho.

5. INSURANCE OF THE CONTRACTOR PRIMARY
The Contractor required coverage shall be considered primary, and all other insurance shall be considered as excess, over and above the Contractor’s coverage. The Contractor’s policies of coverage will be considered primary as it relates to all provisions of the contract.

6. LOSS CONTROL AND SAFETY
The Contractor shall retain control over its employees, agents, servants and subcontractors, as well as control over its invitees, and its activities on and about the subject premises and the manner in which such activities shall be undertaken and to that end, the Contractor shall not be deemed to be an agent of the Owner. Precaution shall be exercised at all times by the Contractor for the protection of all persons, including employees, and property. The Contractor shall make special effort to detect hazards and shall take prompt action where loss control/safety measures should reasonably be expected.

7. HOLD HARMLESS
The Contractor shall hold harmless the Owner, its subsidiaries or affiliates, elected and appointed officials, employees, volunteers, representatives and agents from any and all claims, suits, actions, damages, liability and expenses in connection with loss of life bodily or personal injury, or property damage, including loss or use thereof, directly or indirectly caused by, resulting from, arising out of or occurring in connection with the performance of this Contract, whether arising solely out of the negligence of the Contractor or not. The Contractor’s obligation shall not be limited by or in any way to, any insurance coverage or by any provision in or exclusion or omission from any policy of insurance.

8. PAY ON BEHALF OF THE CITY
The Contractor agrees to pay on behalf of the Owner, as well as provide a legal defense for the Owner, both of which will be done only if and when requested by the Owner, for all Claims as described in the Hold Harmless paragraph. Such payment on behalf of the Owner shall be in addition to any and all other legal remedies available to the Owner and shall not be considered to be the Owner’s exclusive remedy.

PAY ON BEHALF OF THE ENGINEER
The Contractor agrees to pay on behalf of the Engineer, as well as provide a legal defense for the Engineer, both of which will be done only if and when requested by the Engineer, for all claims as described in the Hold Harmless paragraph. Such payment on behalf of the Engineer shall be in addition to any and all other legal remedies available to the engineer and shall not be considered to be the Engineer’s exclusive remedy.

END OF SPECIAL CONDITIONS - SECTION 2
SPECIAL CONDITIONS

SECTION 3

MISCELLANEOUS

1. PROVISIONS REQUIRED BY LAW DEEMED INSERTED. Each and every provision of law and clause required by law to be inserted in the Contract Documents shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein. If, for any reason, any such provision is not inserted in the Contract, or is not correctly inserted, then upon application of either party, the Contract shall forthwith be physically amended to make such insertion or correction.

2. CORRELATION OF DOCUMENTS.

A. The drawings and specifications are cooperative and supplementary. Portions of the work which can be best be illustrated by the drawings may not be included in the specifications and portions best described by the specifications may not be depicted on the drawings. All items necessary or incidental to completely construct or erect the work shall be furnished, whether called for in the specifications or shown on the drawings. Anything mentioned in the specifications and not shown on the drawings, or anything shown or mentioned on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both.

B. In case of disagreement between the drawings and specifications, or within either document itself, the better quality or greater quantity of work shall be estimated and included in the bid and contract price and the matter drawn to the Engineer's attention for decision.

3. NOTICE AND SERVICE THEREOF. Where the manner of giving notice is not otherwise provided for in the Contract Documents, any notice to the Contractor from the Owner relative to any part of the Contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail, to the Contractor at the address given in the Contractor's proposal, or at the last business address known to him who gives the notice, or delivered in person to the Contractor or his authorized representative on the site. It is mutually agreed that such notice shall be sufficient and adequate.

4. SUBCONTRACTING.

A. The Contractor may utilize the services of specialty or minority subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty or minority subcontractors.

B. The Owner reserves the right to approve subcontractors for any work. The Contractor, if requested by the Owner, shall submit to the Owner the proposed award and such information as the Owner may require concerning any subcontractor.

C. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, or under their control, as he is for the acts and omissions of persons directly employed by him.

D. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the work of subcontractors, and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.

E. Nothing contained in the Contract Documents shall create any contractual relationships between any subcontractor and the Owner.
5. PROTECTION OF PERSONS.

A. The Contractor shall:

(1) At all times protect the lives and health of his employees under the Contract;

(2) Take all necessary precautions for the safety of all persons on or in the vicinity of the project site.

(3) Comply with all applicable provisions of Federal, State and Municipal safety laws and building codes.

(4) Comply with all pertinent provisions of the Manual of Accident Prevention in Construction issued by the Associated General Contractors of America, Inc., latest edition, to prevent accidents or injury to persons on or about or adjacent to the premises where the work is being performed. He shall erect and properly maintain at all times, as required by the conditions and progress of the work, all necessary safeguards for the protection of persons and shall post danger signs warning against the hazards created in part by features of construction such as protruding nails, rod hoists, well holes, falling materials, etc., and he shall designate a responsible member of his organization on the work site whose duty shall be the prevention of accidents;

(5) Provide for all safeguards for the protection of those having Right-of-Entry during field review and observation of the work.

B. The Contractor shall comply with all provisions of the "Williams-Steiger Occupational Safety and Health Act of 1970" including any amendments thereto and rules and regulations issued pursuant thereto, applicable to the Work and performance of the Contract. Where a State in which work is performed has passed legislation bearing on Occupational Safety and Health, such legislation and amendments thereto, together with rules and regulations issued pursuant thereto, shall be complied with by the Contractor.

6. AUTHORITY OF ENGINEER.

A. The Engineer, through its duly authorized representatives, shall furnish engineering services during construction of the work to the extent provided in the Contract Documents. He shall observe and review the work in the process of construction or erection. Compliance with the Contract Documents shall be the Contractor's responsibility notwithstanding such observation or review. The Engineer has authority to recommend suspension of the work to the Owner when it appears such suspension may be necessary to accomplish the proper implementation of the intent of the Contract Documents. The authority to observe, review or recommend suspension of the work, or exercise such other authority as may be granted by the Contract Documents, shall not be construed or interpreted to mean supervision of construction, which is the Contractor's responsibility, nor make the Engineer responsible for providing a safe place for the performance of work by the Contractor or by the Contractor's employees, or those of suppliers or subcontractors, or for access, visits, use, work, travel, or occupancy by any other person. The Engineer shall also have the authority to reject any work, materials, or equipment which do not conform to the Contract Documents and to decide technical questions which arise in the execution of the work.

B. The Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work, materials, equipment and supplies which are to be paid for under the Contract and shall decide questions which may arise in relation to said work and its compliance with the Contract Documents. The Engineer's estimates and decisions shall be final and conclusive, except as otherwise expressly provided in case any question shall arise between the parties to the Contract relative to the Contract Documents, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to
receive any money or payment for work under the Contract affected in any manner or to any extent by such question.

C. The Engineer shall decide the meaning and intent of any portion of the Contract Documents where the same may be found obscure or be in dispute.

7. “GOOD REPAIR” PERIOD.

A. The Contractor hereby agrees to keep all work constructed under the Contract in good repair for a minimum period of one (1) year, unless a longer period is otherwise specified in the Contract Documents, from the date of acceptance of all of the work by the Owner. No provision of the Contract documents shall be valid which limits the “Good Repair” period to less than one (1) year from the date of acceptance of all of the work by the Owner. The work may be phased. If the work is phased, each phase of Work completed shall be inspected and approved for use by the Owner but shall not be accepted until all work for all phases is complete and a final inspection for all work has been performed.

B. It is intended that this provision shall apply whether or not bond is required, as a personal obligation of the Contractor.

C. The obligations of the Contractor as herein provided shall be in addition to and not in limitation of any obligations imposed upon him by special guarantees required by the Contract Documents or otherwise prescribed by law.

8. VARIATION FROM ESTIMATED QUANTITIES. The Contractor may reasonably expect a variation in estimated quantities such that the total payment for the completed work may range from 75 to 125 percent of the total amount of the Contract based on the estimated quantities defined in the proposal. The Contractor will not be allowed any claims for anticipated profits, for loss of profits, or for any damages because of a difference between the estimate of any item defined in the proposal and the amount of the item actually required or for the elimination of any part of the work. Funds for construction of the work herein contemplated are limited. The Owner reserves the right to eliminate or reduce the items of the proposal or any of the work as may be required to bring the cost of the work within the limits of available funds.

9. WATER FOR CONSTRUCTION. Water used for construction of this project will be furnished by the Contractor. The Contractor shall make the necessary arrangements with the Owner of the source of water for securing and/or transporting such water. No separate payment will be made for water used but the cost thereof shall be included in the various items of the proposal and bid schedule.

10. LIGHTS AND POWER. The Contractor shall provide, at his own expense, temporary lighting and facilities required for the proper prosecution and inspection of the work.

11. COORDINATION WITH OTHERS. In the event other contractors are doing work in the same area simultaneously with this project, the Contractor shall coordinate his proposed construction with that of the other contractors. The Contractor shall notify the Engineer of said coordination attempts and the results.

12. TESTING, INSPECTION, AND CONTROL. The Owner shall pay for all passing tests, the Contractor shall pay for all failing tests. Charges for failing tests will be deducted from the Contractor’s earnings at the end of each month when the Contractor submits his periodic pay requests. The Contractor will pay for all tests, other than acceptance testing, and the costs of those tests shall be incidental to those items that require testing. The contractor shall furnish, at his own expense, all necessary specimens for testing of the materials, as required by the Engineer. The Contractor shall be responsible for notifying the testing laboratory to pick up the test samples. Also, the Engineer reserves the right to test at any location on the project, and at any frequency he deems necessary before, during and after incorporation of all materials into the project to satisfy himself and ensure that all materials meet the specified requirements. All materials utilized in the project must meet specification requirements before, during and after incorporation into the project.
Any additional testing that the Contractor deems necessary to ensure himself that the materials he is installing meet the required specifications and/or as a proof of the authorized testing laboratory shall be solely the expense of the Contractor whether the tests pass or fail.

13. LINES AND GRADES. Section 50, Item 50-06 of the General Provisions and Technical Specification P-104, Project Survey and Stakeout includes all requirement for all lines, grades, and measurements necessary to the proper prosecution and control of the work contracted for under these specifications shall be provided by the Contractor and he shall be solely responsible for the accuracy of said lines, grades and measurements.

14. TRADE NAMES AND MATERIALS. No material that has been used by the Contractor for any temporary purpose whatsoever is to be incorporated in the permanent structure without written consent of the Engineer.

Where materials or equipment are specified by a trade or brand name, it is not the intention of the Owner to discriminate against an equal product of another manufacturer, but rather to set a definite standard of quality or performance, and to establish an equal basis for the evaluation of bids. Where the words "equivalent", "proper", or "equal to" are used, they shall be understood to mean that the thing referred to shall be proper, the equivalent of, or equal to some other thing, in the opinion or judgement of the Engineer. Unless otherwise specified, all materials shall be the best of their respective kinds and shall be in all cases fully equal to approved samples. Notwithstanding that the words "or equal to" or other such expressions may be used in the plans and specifications in connection with the material, manufactured article or process, the material, manufactured article or process specifically designated shall be used, unless a substitute shall be approved in writing by the Engineer and the Engineer shall have the right to require the use of such specifically designated material, article or process.

15. PROPERTY LINES AND MONUMENTS. The Contractor shall protect all property corner markers and any other monument, and when any such markers or monuments are in danger of being disturbed, they shall be properly referenced and if disturbed shall be reset at the expense of the Contractor.

16. FENCES AND DRAINAGE CHANNELS. Boundary fences or other improvements removed to permit the installation of the work shall be replaced in the same location and left in a condition as good or better than that in which they were found. Existing fences not to be removed and intersecting with new fencing (fencing outside airport property) shall be connected to the new fencing in a manner acceptable to the fence owner and the Owner and/or Engineer.

Where surface drainage channels are disturbed or blocked during construction, they shall be restored to their original condition of grade and cross section after the work of construction is completed.

17. DISPOSAL OF WASTE AND SURPLUS EXCAVATION. All trees, stumps, slashings, brush or other debris to be removed from the site as a preliminary to the construction work shall be removed from the property and legally disposed of in a manner approved by the Engineer and at a site approved by the Owner. No burning on site will be permitted.

All excavated earth in excess of that required for embankment and backfill shall be disposed of in a satisfactory manner as shown on the plans or as directed by the Engineer to a site approved by the Owner.

18. AIR POLLUTION. The Contractor shall comply with all Federal, State and Local Requirements.

19. EXISTING UTILITIES AND SERVICE LINES. The Contractor shall be responsible for the protection of all existing utilities or service lines crossed or exposed by his construction operations. Where existing utilities or service lines are cut, broken or damaged, the Contractor shall replace or repair the utilities or service lines with the same type of original material and construction, or better, at his own cost and expense, with the exception of those items included in the bid schedule.
20. RECORDS OF MATERIALS PURCHASED. By a certain time each month as defined and established at the preconstruction conference, the Contractor shall furnish to the Engineer, duplicate copies of all invoices for materials furnished to be incorporated into the work, plus a statement of all materials previously included on monthly estimates and incorporated into the work during the preceding month. This information is to be used to determine the value of materials on hand to be included in the monthly estimate for periodical payment.

21. CONTRACTOR ACCESS TO PROJECT SITE. The Contractor shall have a specific access route to the project site. This route is shown in the construction drawings. The Contractor shall use this route to bring all equipment and materials in. If the Contractor has a better route that will prevent damage to existing roads or provide safer access to the construction site, the Contractor shall supply a drawing showing the recommended route to the Owner and Engineer for approval at the preconstruction conference.

22. NIGHTTIME WORK. Nighttime Work is not permitted unless approved, in writing, by the Boise Airport and the Engineer. The Contractor shall request in writing approval to perform nighttime work. If the Engineer approves said nighttime work, the Contractor shall coordinate closely with the Engineer and the Owner during any and all approved nighttime work. This includes any nighttime hauling of materials to the project site. If the Contractor wishes to perform nighttime work or haul materials at night, the Contractor shall reimburse the Owner for any nighttime inspection costs incurred by the Owner to adequately and properly inspect said nighttime work or hauling of materials.

The Contractor shall coordinate with the Owner and Engineer each day before nighttime operations to ensure all special instructions, time limitations, directives, etc. are adhered to each night of nighttime operations. The Contractor shall not enter areas requiring nighttime construction operations until cleared to do so by the Owner. Any violation will result in a $1,000.00 fine for each individual and each piece of equipment committing the infraction.

23. DUST CONTROL. The Contractor shall maintain strict dust control during the project duration. There are operational areas, aircraft parked on the airport as well as commercial facilities that perform maintenance and repair work to aircraft. Therefore, it is imperative that strict dust control be maintained so that damage or nuisance to the areas and facilities described above or airport operational areas is prevented. This dust control shall also include the dust that may occur during any construction procedure.

24. TRIP TICKETS, INVOICES, WEIGH BILLS, ETC. The Contractor shall be responsible for supplying any and all trip tickets, invoices, weigh bills, etc. which show the quantities actually used in the construction of the project. All said trip tickets, invoices, weigh bills, etc. shall relate directly to specific bid items. If the Contractor fails to submit said trip tickets, invoices, weigh bills, etc. to the Engineer or his authorized representative prior to or during the time of installation of materials into the project, any material overruns claimed by the Contractor at the end of the project shall not be accepted.

25. FINAL IN-PLACE EXCAVATION & EMBANKMENT SECTIONS. At the completion of the project, the Contractor shall submit final in-place earthwork cross sections for the entire project site affected by earthwork operations with the detailed calculations as to as-built excavation and/or embankment. The Contractor may use the cross sections provided in the plans and plot the as-built conditions on those cross section sheets along with the accompanying calculations. The Contractor shall be paid based upon the volume between the original ground line and the as-built ground line. The Contractor shall be paid based on the type of operations for which a bid price was provided.

END OF SPECIAL CONDITIONS - SECTION 3
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SPECIAL CONDITIONS

SECTION 4

LISTING OF DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF THE RESIDENT PROJECT REPRESENTATIVE.

The Owner and/or Engineer shall furnish a Resident Project Representative (RPR), assistants and other field staff to assist the Engineer in observing performance of the Work of the Contractor.

Through more extensive on-site observations of the work in progress and field checks of materials and equipment by the RPR and assistants, the Engineer shall endeavor to provide further protection for the Owner against defects and deficiencies in the work; but, the furnishing of such services will not make the Engineer responsible for or give the Engineer control over construction means, methods, techniques, sequences or procedures or for safety precautions or programs, or responsibility for the Contractor's failure to perform the work in accordance with the Contract Documents.

The duties and responsibilities of the RPR are limited to those of the Engineer in the Engineer's agreement with the Owner and in the construction Contract Documents, and are further limited and described as follows:

A. General

1. The RPR is the Engineer's agent at the site and will act as directed by and under the supervision of the Engineer, and will confer with the Engineer and Owner regarding the RPR's actions. The RPR's dealings in matters pertaining to the on-site work shall in general be with the Engineer and the Contractor keeping the Owner advised as necessary. The RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of the Contractor. The RPR shall generally communicate with the Owner with the knowledge of and under the direction of the Engineer.

B. Duties and Responsibilities of the RPR

1. Schedules: Review the progress schedule, schedule of shop drawing, product data and samples submittals and schedule of values prepared by the Contractor and consult with the Engineer concerning acceptability.

2. Conferences and Meetings: Attend meetings with the Contractor and Owner, such as preconstruction conferences, weekly progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

3. Liaison:
   a. Serve as the Engineer's liaison with the Contractor, working principally through the Contractor's superintendent and assist in understanding the intent of the Contract Documents; and assist the Engineer in serving as the Owner's liaison with the Contractor when the Contractor's operations affect the Owner's on-site operations.

   b. Assist in obtaining from the Owner additional details or information, when required for proper execution of the Work.

4. Shop Drawings and Samples:
   a. Record date of receipt of shop drawings, product data and samples.
b. Receive samples that are furnished at the site by the Contractor, and notify the Engineer of availability of samples for examination.

c. Advise the Engineer and the Contractor of the commencement of any work requiring a shop drawing, product data or sample if the submittal has not been approved by the Engineer.

5. Review of Work, Rejection of Defective Work, Inspections and Tests:

a. Conduct on-site observations of the work in progress to assist the Engineer in determining if the work is in general proceeding in accordance with the Contract Documents.

b. Report to the Engineer whenever the RPR believes that any work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise the Engineer of work that the RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

c. Verify that tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate personnel, and that the Contractor maintains adequate records thereof; and observe, record and report to the Engineer appropriate details relative to the test procedures and startups.

d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the work, record the results of those inspections and report to the Engineer.

6. Interpretation of Contract Documents: Report to the Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to the Contractor clarifications and interpretations as issued by the Engineer.

7. Modifications: Consider and evaluate the Contractor's suggestions for modifications in drawings or specifications and report the suggestions along with the RPR's recommendations to the Engineer. Transmit to the Contractor decisions as issued by the Engineer.

8. Records:

a. Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings, product data and samples, reproductions of original Contract Documents including all work directive changes, addenda, change orders, field orders, additional drawings issued subsequent to the execution of the Contract, the Engineer's clarifications and interpretations of the Contract Documents, progress reports, and other work related documents.

b. Keep a diary or log book, recording the Contractor hours on the job site, weather conditions, data relative to questions of work field orders, change orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to the Engineer.

c. Record names, addresses and telephone numbers of all the Contractors, subcontractors and major suppliers of materials and equipment.

9. Reports:

a. Furnish the Engineer daily progress reports of progress of the work and of the Contractor's compliance with the progress schedule and schedule of shop drawing, product data and sample submittals.
b. Consult with the Engineer in advance of scheduled major tests, inspections or start of important phases of the work.

c. Draft proposed change orders and field orders, obtaining backup material from the Contractor and recommend to the Engineer change orders and field orders.

d. Report immediately to the Engineer and the Owner the occurrence of any accident.

10. Payment Requests: Review applications for payment with the Contractor for compliance with the established procedure for their submission and forward with recommendations to the Engineer, noting particularly the relationship of the payment requested to the schedule of values, work completed and materials and equipment delivered at the site but not incorporated in the Work.

11. Certificates, Maintenance and Operation Manuals: During the course of the work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by the Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to the Engineer for review and forwarding to the Owner prior to final payment for the work.

12. Completion:

a. Before the Engineer issues a Certificate of Substantial Completion, submit to the Contractor a punch list of observed items requiring completion or correction.

b. Conduct final inspection in the company of the Engineer, the Owner and the Contractor and prepare a final punch list of items to be completed or corrected.

c. Observe that all items on the final punch list have been completed or corrected and make recommendations to the Engineer concerning acceptance.

C. Limitations of Authority of the Resident Project Representative (RPR):

1. The RPR shall not authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by the Engineer.

2. The RPR shall not exceed the limitations of the Engineer's authority as set forth in the Contract Documents.

3. The RPR shall not undertake any of the responsibilities of the Contractor, subcontractors or the Contractor's superintendent.

4. The RPR shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.

5. The RPR shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the work.

6. The RPR shall not accept shop drawing, product data or sample submittals from anyone other than the Contractor.

7. The RPR shall not authorize the Owner to occupy the work in whole or in part.
8. The RPR shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by the Engineer.

END OF SPECIAL CONDITIONS - SECTION 4
SPECIAL CONDITIONS

SECTION 5

CONSTRUCTION SAFETY AND PHASING PLAN
BOISE AIRPORT

Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways B and J

1. Purpose

The Construction Safety and Phasing Plan (CSPP) sets forth guidelines and requirements for the project to help ensure the highest levels of safety, security and efficiency at the airport at the time of construction. Guidelines and requirements for the CSPP are developed from FAA Advisory Circular No. 150/5370-2G Operational Safety on Airports During Construction, except as modified herein.

The CSPP is a single document to be used by all personnel involved in the project. The CSPP covers the actions of not only the construction personnel and equipment, but also the action of inspection personnel and airport staff.

Additionally, The Contractor shall develop and submit, for review and approval, a Safety Plan Compliance Document (SPCD), prior to the issuance of a notice-to-proceed (NTP). The SPCD shall comply with the provisions and requirements outlined in the CSPP and with those requirements outlined in FAA Advisory Circular 150/5370-2G Operational Safety on Airports During Construction. The SPCD must also include a certified statement by the Contractor that indicates its understanding of those operational, safety and security requirements outlined in the CSPP. The certified statement must also assert that the Contractor will not deviate from the approved CSPP and SPCD unless written approval is granted by the Airport.

Implementation of the CSPP and SPCD will minimize interruptions to airport operations, reduce construction costs, and maximize the performance and safety of construction activity. Strict adherence to the provisions of the CSPP and SPCD by all personnel assigned to or visiting the construction site is mandatory for AIP funded construction projects. In the event Contractor activities are found in non-compliance with the provisions of the CSPP and/or the SPCD, the Resident Project Representative will direct the Contractor, in writing, to immediately cease operations in violation. In addition a safety meeting will be conducted for the purpose of reviewing those provisions in the CSPP and/or SPCD which were violated. The Contractor will not be allowed to resume any construction operations until the safety meeting has been conducted and the issue has been addressed and corrected or resolved.

The CSPP in its entirety follows this page.
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CONSTRUCTION SAFETY PHASING PLAN
Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

Overview:
Safety is the primary consideration at the Boise Airport, especially during construction. The construction safety phasing plan, (CSPP) has been developed in order to minimize the interruptions to the airport operations and reduce safety risks. The project CSPP has been incorporated into the contract documents. Adherence to the CSPP by all participants is mandatory. Boise Airport is the authority responsible for the execution of this plan and for safety at the airport.

Proposed Action: Reconstruct Taxiway H to be perpendicular with Runway 10R-28L. Mill and overlay Taxiways J and B. Schedule II (Non-Federal) project work includes: fill infield areas along Taxiway H with crushed aggregate, construct two (2) 72 yard Portland Cement Concrete pads at the UPS West Ramp.

General Contractor: TBD
Design Engineer: RS&H, Greg Riley (801) 428-7545
Construction Inspection: T-O Engineers, RPR TBD
Sponsor Contacts: Markus Green (208) 972-8435, (208) 598-5020 (c) and Matt Petaja (208) 972-8392
Airport Operation: (208) 972-8420

Operational Safety on Airports During Construction
a. To the extent possible, this CSPP follows AC 150/5370-2G. Details that cannot be determined at this stage are to be included in the SPCD.

1. Coordination.
   (a) Contractor progress meetings.
       The CSPP will be discussed at the pre-bid and pre-construction conferences. Operational safety will be discussed at the initial onsite safety briefing, prior to each construction phase. Operational safety will be a standing agenda item for contractor’s weekly progress meetings.
   (b) Scope or schedule changes.
       Changes in the scope or schedule will be reviewed by the sponsor, to determine if revisions to the CSPP and SPCD are necessary. Changes to the CSPP or SPCD will be submitted to FAA.
   (c) FAA ATO coordination
       • The CSPP was reviewed with local ATC and Tech Ops staff prior to submittal to the ADO.
       • The CSPP was submitted to the ADO for circulation through the FAA.
       • A Strategic Event form will be submitted to FAA ATO, 45 days prior to NTP.
       • Notice of proposed Construction will be submitted to FAA 60 days prior to NTP.
       • Airway facility shutdowns and restarts will be coordinated with FAA ATO, 14 days prior to the event.
       • Changes to NAVAIDS: N/A, there are no proposed changes to NAVAIDS
       • Critical area grading changes: N/A, no critical area changes are proposed.
2. Phasing.
   (a) Phase elements.

   The project will be completed in phases to maintain operational safety, minimize impacts to users, and provide construction efficiency. The phasing plans are attached:

   - **Areas closed to aircraft operations** are shown on each phasing plan.
   - **Duration of work and closure** is shown in the legend on each phasing plan.
   - **Emergency access** shall be marked and maintained through the construction.
   - **Construction staging areas** and employee parking are shown on the phasing plan.
   - **Construction access and haul routes** are shown on the phasing plan. If required, flaggers are shown at locations where construction traffic will cross aircraft taxi routes.
   - **Impacts to NAVAIDs include**: Closure of Runway 10R-28L requires turning off Runway 10R/28L VASIs and ILS. A Strategic Event form will be submitted to FAA ATO 45 days prior to NTP and all work will be coordinated with local FAA Tech Ops staff.
   - **Lighting and markings changes**. For taxiways, lighting on closed portions of taxiways will be turned off or covered, and signs will be covered. A yellow fabric X will be placed on the closed taxiway and low-profile lighted barricades will be placed across the taxiway.
   - For runway closures, lighted X’s will be placed on the runway ends and the lights will be turned off.
   - **Available runway length**;

   Runway 10L/28R, the full length will be available.

   Runway 10R/28L will be closed for takeoff and landing for 24 hours per day for the duration of Phase 1B construction, as shown on the attached phasing plans.

   - **Declared distances**: N/A, no changes are proposed.
   - **Lead time for required notifications**;

   Notice of Proposed Construction (7460); 60 days prior to NTP

   Sponsor Strategic Event Submission form; 45 days prior to NTP

   NOTAMs; 48 hours prior to scheduled event

   (b) Construction safety drawings.

   Operational safety procedures and methods in affected areas are included in the contract documents:

3. Areas and operations affected by the construction activity.
   (a) Identification of affected areas.

   Areas and operations affected by the construction activity are shown on the attached phasing plan sheets and listed in Table 1 – OPERATIONS EFFECTS, on the following pages:
### TABLE 1 – OPERATIONS EFFECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Reconstruct Taxiway H, Mill/Overlay a Portion of Taxiways J &amp; B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Phase 1A – 55 days construction</td>
</tr>
<tr>
<td>Scope of Work</td>
<td>Reconstruct Taxiway H</td>
</tr>
<tr>
<td>Operational Requirements</td>
<td>ADG Normal (Existing)</td>
</tr>
<tr>
<td>Taxiway F (east of TW K)</td>
<td>IV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>Reconstruct Taxiway H, Mill/Overlay a Portion of Taxiways J &amp; B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Phase 1B - 35 days construction</td>
</tr>
<tr>
<td>Scope of Work</td>
<td>Reconstruct Taxiway H</td>
</tr>
<tr>
<td>Operational Requirements</td>
<td>ADG Normal (Existing)</td>
</tr>
<tr>
<td>Runway 10R-28L</td>
<td>IV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>Reconstruct Taxiway H, Mill/Overlay a Portion of Taxiways J &amp; B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Phase 1C – 15 days construction</td>
</tr>
<tr>
<td>Scope of Work</td>
<td>Reconstruct Taxiway H</td>
</tr>
<tr>
<td>Operational Requirements</td>
<td>ADG Normal (Existing)</td>
</tr>
<tr>
<td>Taxiway F (between J &amp; K)</td>
<td>IV</td>
</tr>
<tr>
<td>Taxiway H</td>
<td>IV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>Reconstruct Taxiway H, Mill/Overlay a Portion of Taxiways J &amp; B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Phase 2A – 3 days construction</td>
</tr>
<tr>
<td>Scope of Work</td>
<td>3” Mill/3” Overlay Taxiway</td>
</tr>
<tr>
<td>Operational Requirements</td>
<td>ADG Normal (Existing)</td>
</tr>
<tr>
<td>Taxiway J (North of UPS)</td>
<td>IV</td>
</tr>
</tbody>
</table>
# TABLE 1 – OPERATIONS EFFECTS (cont.)

<table>
<thead>
<tr>
<th>Project</th>
<th>Reconstruct Taxiway H, Mill/Overlay a Portion of Taxiways J &amp; B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Phase 2B – 7 days construction</td>
</tr>
<tr>
<td>Scope of Work</td>
<td>3” Mill/3” Overlay Taxiway</td>
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<tr>
<td>Operational Requirements</td>
<td>ADG Normal (Existing)</td>
</tr>
<tr>
<td></td>
<td>Phase 2B (Anticipated)</td>
</tr>
<tr>
<td>Taxiway J (UPS Gate 3)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>Reconstruct Taxiway H, Mill/Overlay a Portion of Taxiways J &amp; B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Phase 3 – 30 days construction</td>
</tr>
<tr>
<td>Scope of Work</td>
<td>3” Mill/3” Overlay Taxiway/Shoulder</td>
</tr>
<tr>
<td>Operational Requirements</td>
<td>ADG Normal (Existing)</td>
</tr>
<tr>
<td></td>
<td>Phase 3 (Anticipated)</td>
</tr>
<tr>
<td>Taxiway B (between D &amp; M)</td>
<td>IV</td>
</tr>
<tr>
<td></td>
<td>Closed</td>
</tr>
</tbody>
</table>
CONSTRUCTION SAFETY PHASING PLAN
Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

(1) Closing or partial closing of runways, taxiways, and aprons:

Phase associated closures are identified in the previous section, Section 2 Phasing and graphically illustrated in the attached exhibits, reference the attached phasing plan sheets of this document. The term ‘partial closure’ means a portion of the pavement is unavailable for any aircraft operation. Elements of the project work areas have been found to penetrate the Taxiway Object Free Areas of the surrounding taxiways necessitating their closure during construction. These areas have been identified in the exhibits provided in the attached phasing plan sheets.

(2) Closing ARFF access routes: Emergency access shall be maintained during construction. Emergency access through barricades shall be delineated with yellow traffic candlesticks.

(3) Closing Airport and airline support vehicle access routes: N/A, no closures proposed.

(4) Utility interruptions: N/A, no utility interruptions are proposed.

(5) Approach/departure surfaces affected by object height: N/A, Construction activities and equipment will not impact approach/departure surfaces to active runways.

(6) Construction areas: Construction areas are delineated by orange traffic candlesticks or low-profile barricades. Staging areas and access routes are shown on the attached phasing plans.

(b) Mitigation of effects.

(1) Temporary changes to runway and taxiway/taxilane operations:

- Runway 10R/28L will be temporarily closed during construction, as shown on the attached phasing plans. Lighted X’s will be placed on both runway ends. Runway lights will be turned off and locked out. Runway signs not used for taxiway crossings will be covered. FAA Tech Ops will turn off the VASIs and the ILS. Low-profile lighted barricades will be places to block off portions of the runway impacted by construction.

- Portions of Taxiway F will be closed during Phase 1A and 1C. Portions of Taxiway J will be closed during Phase 2. Portions of Taxiway B will be closed during Phase 3. This is shown on the attached phasing plans. Portions of taxiways/taxilanes closed will be barricaded off with low-profile lighted barricades. Edge lights and signs within closed areas will be covered and/or turned off. Yellow fabric X’s will be placed on closed taxiway/runway entrances.

- Within the construction area, orange traffic cones will be placed along the edge of active safety areas.

- Flaggers with ground control radios will be positioned at locations where construction traffic crosses aircraft taxi routes.

(2) Detours for ARFF and other airport vehicles: ARFF and airport personnel will be given phasing plans and briefings at the beginning of each phase. Emergency access shall be maintained during all construction. Access through construction areas and barricades shall be delineated with yellow traffic cones.

(3) Maintenance of essential utilities: Known utilities have been identified on the plan. The contractor is required to locate and protect utilities and make repairs to any damage utility.
CONSTRUCTION SAFETY PHASING PLAN

Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

4. Temporary changes to air traffic control procedures: The CSPP and construction phasing plans will be reviewed with local ATC and FAA Tech Ops staff prior to submittal of the CSPP to the ADO. Air traffic controllers will be given the phasing plans that show closed areas and taxi routes for each phase. The air traffic control staff will be briefed weekly and will need to be coordinated closely with at the beginning of each phase.

4. Protection of navigation aids (NAVAIDs).

A Strategic Event form will be submitted to FAA ATO 45 days prior to construction. FAA ATO and FAA Technical Operations will be invited to pre-construction meeting to review project.

The line of sight from the ATCT to the movement area will not be impacted or changed by this project. NAVAID critical areas are identified on the plans and construction and access routes are outside critical areas. A 7460-1 for construction equipment will be submitted to FAA 60 days prior to construction.

5. Contractor access

(a) Location of stockpiled construction materials: Where possible, contractor should use the designated staging area for stockpiled materials and equipment storage. Stockpiled materials and equipment storage are not permitted within any active runway or taxiway safe area, object free zone, or object free area and within any NAVAID critical area. Stockpiled materials will be limited to 10’ height.

(b) Vehicle and pedestrian operations. All vehicles shall be marked with company identification and have a 3’x3’ white/orange checkered flag or strobe to enter the AOA. No pedestrian access will be allowed on this project.

Personnel performing flagging duties and having unescorted access to the movement area will receive movement area driver’s training, in accordance with the airport’s certification manual. All other personnel working on the project and not under escort will receive non movement area driver’s training, in accordance with the airport’s Part 139 certification manual.

All personnel working on this project will receive security training, in accordance with the airport’s security program. A gate guard is required at access gates to ensure unauthorized persons do not enter the AOA and the gate remains secure at all times.

(1) Construction site parking: The attached phasing plans show designated contractor employee parking areas.

(2) Construction Equipment parking: Construction equipment is prohibited in any active runway or taxiway safety area or object free areas and within any active NAVAID critical area. Inactive equipment should be stored in the designated contractor staging area. Unless unfeasible, construction equipment shall be parked on the shoulder of the closed taxiway.

Access and haul routes: Contractor access gates and haul routes are designated on the attached phasing plans. The contractor shall obtain prior approval from the sponsor and engineer for any changes to the designated access gates or haul routes. At active taxiway crossings, a flagger with radio contact with the tower will be stationed to control construction traffic.
Marking and Lighting of vehicles: Construction vehicles shall have company identification in 2" letters on both sides. All construction vehicles shall have a 36"x36" white/orange checkered flag or strobe.

(3) Description of proper vehicle operations:

All vehicles shall be checked prior to operation. All vehicles shall be operated in a safe and controlled manner for the conditions. The maximum speed limit is 25 mph. Vehicles are required to stop at all access gates, stop signs, and when instructed by flagger. Aircraft have the right of way at all times. All vehicles shall stay within designated access routes and work areas.

If communication is lost with the tower, the flaggers will have cell phone backup. In the case of lost communications with the tower, driver’s training instructs drivers to point their vehicle towards the tower and flash their headlights. The tower will dispatch airport operations to provide an escort or use the light gun to provide instructions to the driver.

(4) Required escorts: Airport driver’s training provides training for providing escorts. The contractor will have designated personnel that are available to provide escort.

(5) Training requirements for vehicle drivers: All personnel operating a vehicle or escorting must have a valid state driver’s license and current airport driver’s license and practical test, in accordance with the airports Part 139 certification manual.

(6) Situational Awareness: Situational awareness is taught in the airport's driver’s training.

(7) Two-way radio communication procedures:

(a) General: Contactor personnel with movement area driver’s license will receive training on proper procedures for communications. Personnel with non-movement driver’s license will be under the control of a Flagger.

(b) Two-way radio communications with the ATCT: Contractor personnel with movement areas driver’s license may use two-way radio communication with the tower. All other contactor personnel will follow the instructions of the flagger or escort having two-way radio communication with the tower.

(c) Radio Frequencies: Ground control is 121.7 and Tower control is 118.1.

(d) Proper radio usage; Movement area license training covers proper radio usage.

(e) Proper phraseology: Movement area license training covers proper phraseology.

(f) Light gun signals: Movement area license training covers light gun signals.

(8) Maintenance of the secured area:

(a) Fencing and Gates: All contractor personnel will go through airport security training and badging, per the Airport security program. The contactor is required to have gate guards at access gates to prevent unauthorized access to the AOA.

(b) Badging requirements: Security badging complies with 49 CFR Part 1542 and the Airport Security Program.

(c) 49 CFR Part 1542: Boise Airport meets the standards for access control, movement of ground vehicles, and identification of construction contractors’ personnel.
CONSTRUCTION SAFETY PHASING PLAN
Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

6. Wildlife management:
   (a) Trash: The contractor is required to control and remove waste that might attract wildlife.
   (b) Standing water: The contractor is required to control drainage to prevent standing water.
   (c) Tall grass and seeds: N/A, there is no seeding involved in this project. Asphalt millings will be used to cover safety areas adjacent to the taxiway and runway pavement.
   (d) Poorly maintained fencing and gates: Fencing will not be disturbed in this project. The contractor shall furnish a gate guard at active access gates to prevent unauthorized entry.
   (e) Disruption of existing wildlife habitat: The contractor shall notify airport operations at 424-5670 concerning any wildlife hazards.

7. Foreign Object Debris (FOD) management: The contractor is required to continuously monitor active movement area crossings for FOD and immediately remove any FOD. The contractor shall provide a powered leaf blower at each flagger crossing, to remove FOD. In addition, the contractor shall have available a vacuum truck or power sweeper to clean the surface of any active aircraft movement area of any foreign object (FOD).

8. Hazardous materials (HAZMAT) management: The contractor is required to have spill containment and clean up materials on site and immediately clean up any hazardous material spill. The contractor is required to handle, store, and dispose of any hazardous materials in accordance with state and federal law.

   (a) Maintenance of a list of responsible representatives/points of contact.
      The contractor shall make prompt notification to airport operations at 208-972-8420 and onsite engineer of any unsafe conditions. Airport operations will notify tower about the unsafe condition. The contractor shall notify airport operations when the unsafe condition is resolved.
   (b) Notice to Airmen (NOTAM): Construction activities that impact airport operations will be coordinated in advance with airport project manager and the onsite engineer. The Airport Project Manager will request NOTAMs and Airport Operations will issue, modify, and cancel the NOTAMS through the FAA NOTAM system. NOTAMS shall be in-place prior to the start of any construction operations within the movement area.
      The airfield status will be coordinated with airport operations and NOTAMS posted to inform users of facility availability, operational status, and NAVAID impacts.
   (c) Emergency notification procedures: The procedure for making emergency notification is to call 911, provide location and details on the emergency, and then call operations at 208-972-8420.
   (d) Coordination with ARFF Personnel: The contractor shall contact airport operations for all coordination with ARFF and other emergency services.
      No changes to water lines or fire hydrants are planned for this project.
      ARFF and airport personnel will be given phasing plans and briefings at the beginning of each phase to identify detours. Emergency access shall be maintained through construction areas and access though barricades shall be delineated with yellow traffic cones.
CONSTRUCTION SAFETY PHASING PLAN

Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

(e) Notification to the FAA:

(1) Part 77: A 7460-1 for construction equipment has been submitted to FAA.

(2) Part 157: N/A

(3) NAVAIDS: For emergency notification about impacts to airport and FAA owned NAVAIDs, contact 866-432-2622.

10. Inspection requirements.

(a) Daily inspections: The contractor’s designated safety officer shall perform daily inspections of the work areas for compliance with the CSPP and SPCD. The onsite engineer shall conduct daily inspections of the work areas and notify contractor and sponsor of any safety concerns.

(b) Final inspections: Prior to opening any area for aircraft movement, the contractor, engineer, and airport operations shall inspect the area being activated for compliance with Part 139 requirements.

11. Underground utilities:

The contract documents require the contractor to locate and protect underground utilities. The contractor is required to immediately notify Airport Operations and the utility owner of any accidental utility disruption. The Contractor shall expeditiously repair any damaged utility at no cost to the owner.

12. Penalties.

Under Special Conditions of the contract. In the event the contractor activities are found in non-compliance with the provisions of the CSPP or SPCD, the engineer will direct the contractor, to immediately cease operations in violation. A safety meeting will be held to review the provisions of the CSPP or SPCD that are being violated. The contractor will not be allowed to resume operations until the safety meeting has been held and the non-compliant conditions have been corrected or resolved. Any contractor or subcontractor employee violating any safety or security regulation may be removed from the project.

13. Special conditions.

Special conditions that may require suspension of construction activities include low visibility conditions, aircraft emergency, or other airport declared emergency. The contract allows construction to be halted at any time for special conditions or safety.
14. Runway and taxiway visual aids.

(a) General: Markings, signs, lighting, and visual NAVAIDs will not be impacted on active taxiways and runways.

(b) Markings:

(1) Closed runways and taxiways:

   (a) Permanently closed runway: N/A, no permanently closed runway is proposed.

   (b) Temporarily closed runways: Lighted X’s will be placed near the runway ends on the closed runway and runway lights will be turned off.

   (c) Partially closed runways and displaced thresholds:

      (i) Partially closed Runways: N/A, no partially closed runway is proposed.

      (ii) Displaced Thresholds: N/A, no displaced threshold is proposed.

(d) Taxiways

   (i) Permanently closed taxiways: N/A, no permanently closed taxiway is proposed.

   (ii) Temporarily closed taxiways: Low profile lighted barricades will be placed to block off the closed portion of the taxiway and a 30’x30’ yellow X will be placed at the entrance of the closed taxiway from the runway. Taxiway edge lights and signs in closed areas will be covered or turned off.

(e) Temporarily closed airport: N/A, no temporary closure of the airport is proposed.

   (i) Temporary markings: N/A

   (ii) Removal or covering of markings: N/A

   (iii) Threshold bars, chevrons, and arrows: N/A

   (iv) Paint application rate: N/A

(f) Lighting and visual NAVALDs: Visual NAVALDs will be turned off by FAA Technical Operations staff. Runway and taxiway lighting in closed areas will be turned off and tagged out. If it is not possible to turn off lights in areas closed, the lights will be covered, to prevent light leakage.

(2) Permanently Closed Runways and Taxiways: N/A, no permanently closed runway or taxiway is proposed.

(3) Temporary Closed Runways: Lighted X’s shall be deployed on both ends of the closed runway and maintained for the duration of the project. The runway edge lights will be turned off and locked out. Runway signs that will not be used for crossing taxiways will be covered.

(4) Partially Closed Runways and Displaced Thresholds: N/A

   (a) Partially Closed Runways: N/A, no partially closed runway is proposed.

   (b) Displace Thresholds: N/A, no displaced threshold is proposed.

   (c) Temporary Runway Thresholds and Runway Ends: N/A, no temporary runway thresholds or runway ends are proposed.

   (d) Temporary Threshold on an Unlighted Runway: N/A, no temporary thresholds proposed.
CONSTRUCTION SAFETY PHASING PLAN

Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

(e) Temporary Threshold Lights and End Lights and Visual NAVAIDS: N/A, no temporary thresholds proposed.

(f) Threshold and Edge Lighting Color and Spacing: N/A, no temporary threshold proposed.

(g) Reconfigured Yellow Lenses: N/A, no temporary threshold proposed.

(h) Relocated Visual Glide Slope Indicator: N/A, no temporary threshold proposed.

(i) NOTAMs: A NOTAM will be issued for the temporary runway and taxiway closures and affected lighting, markings, signs, and NAVAIDS.

(5) Temporarily Closed Taxiways: Taxiway lights in closed areas will be turned off and tagged out. If it is not possible to turn off lights in areas closed, the lights will be covered.

(c) Signs: Signs leading into or in closed areas shall be covered, to prevent pilot confusion. Orange construction signs reading, “CONSTRUCTION AHEAD”, shall be placed by the Contractor at the locations indicated in the phasing plans.

15. Marking and signs for access routes:

Construction vehicle access routes are along an existing vehicle service road. Stop signs and flaggers will be place at points where the access route crosses an active aircraft movement area.

16. Hazard markings, lighting, and Signing:

(a) Hazard marking and lighting:

Hazard barricades with flashing lights and flags will be used to mark areas closed to aircraft, excavations, stockpiled materials, and inactive equipment. Spray paint will be used to identify utilities. Areas off limits to the contractor will be marked with traffic barricades.

(b) Equipment:

(1) Barricades:

Type 1 barricades, low profile, water filled barricades with markings, flags, and flashing lights will be used in to mark areas closed to aircraft operations and mark hazards such as excavations, and stockpiled materials.

Type 2 barricades, standard orange traffic candlesticks will be used to mark the work area adjacent to the active runway and taxiways and mark hazards such as excavations, and stockpiled materials.

Type 2 barricades, Yellow traffic candlesticks will be used to designate ARFF access routes through barricades.

(2) Lights:

Red flashing lights will be used to mark areas closed to aircraft movement and within the object free areas of any active runway or taxiway.

(3) Supplemental barricades with signs: N/A.

(4) Air Operations Area – General:

Barricades will not be permitted within any active runway safety area or active taxiway safety area.
CONSTRUCTION SAFETY PHASING PLAN

Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

(5) Air Operations Area – Runway/Taxiway intersections:
   Type 1 barricades, highly reflective, low profile, water filled, and with flags and flashing lights will be used to close taxiways leading to a closed runway.

(6) Air Operations Area – Other:
   Beyond the runway or taxiway object free areas, type 2 traffic barricades will be used to mark hazards and equipment.

(7) Maintenance:
   The contractor is required to inspect and maintain the hazard barricades and lights daily.

17. Protection of runway and taxiway safety areas:
   (a) Runway Safety Area (RSA):
      (1) RSA protection on active runways: No construction will occur within the safety area of an active runway. Type 2 orange traffic barricades will be placed along the runway safety area to delineate areas closed to construction equipment and personnel.
      (2) RSA adjustments: N/A, no RSA adjustments are proposed.
      (3) Blasting operations: N/A, blasting is prohibited.
      (4) Excavations: N/A
         (a) No excavations will be done within the RSA of an active runway.
         (b) Open trenches and excavations within the construction site shall be prominently marked with type 2 orange traffic barricades.
   (5) Erosion Control:
      The contractor is responsible for development and implementation of a storm water pollution prevention plan (SWPPP) to control soil erosion within the construction area. The contractor is responsible for obtaining required federal and local permits.
   (b) Runway Object Free Area (ROFA): Material stockpiles and/or construction equipment storage are prohibited in the object free area of an active runway.
   (c) Taxiway Safety Area (TSA):
      (1) TSA protection on active runways: No construction will occur within the safety area of an active taxiway.
      (2) TSA adjustments: N/A, no TSA adjustments are proposed.
      (3) Blasting operations: N/A, blasting is prohibited.
      (4) Excavations:
         (a) No excavations will occur within the safety area of an active taxiway.
         (b) Open trenches and excavations at the construction site shall be prominently marked with Type 2 orange barricades.
CONSTRUCTION SAFETY PHASING PLAN
Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

(d) Taxiway Object Free Area (TOFA):

(1) TOFA dimensions adjustment: Portions of Taxiway J will be adjusted to a wingspan of 147.1 feet (Airbus 300-600). Temporary TOFA of 113’ will be used for Taxiway J and 99’ for Taxilane K.

(2) Offset taxiway markings: N/A, no offset taxiway markings are proposed.

(3) Construction within the TOFA: N/A, No construction will occur within the TOFA of an active taxiway.

(e) Obstacle Free Zone (OFZ):

No personnel, stockpiled materials, or equipment are allowed within the OFZ of the active runway (200’ from centerline).

(f) Runway approach/departure surfaces:

(1) Construction in runway approach/departure area: N/A, there is no construction within the runway approach/departure areas of an active runway.

(2) Partially runway closures: N/A, the runway is entirely closed during construction.

(3) Displaced thresholds: N/A, no displaced threshold is proposed.

18. Other limitations on construction.

(a) Prohibitions:

(1) Tall equipment: Construction equipment is limited to 25’ above ground surface.

(2) Open flames: Open flames are prohibited on this project.

(3) Electric Blasting caps: N/A, all forms of blasting are prohibited on this project.

(4) Flare Pots: N/A, flare pots are prohibited.

(b) Restrictions:

(1) Construction suspension:

Construction shall be suspended during low visibility (SMGCS) operations or in case of emergencies or other operational needs.

(2) Work area restrictions: Work shall be performed in accordance with the contract plans.

(3) Day or night construction restrictions:

Work is restricted to daylight hours, (30 minutes after sunrise to 30 minutes prior to sunset). Any exception needs coordination with the ATCT and prior written approval by the engineer and sponsor.

(4) Seasonal restrictions: N/A

Advisory Circulars: Documents produced by the FAA providing guidelines. Advisory Circulars are available at Internet address www.faa.gov/airports_airtrafic/airports/resources/Advisory-circulars

Aircraft Movement Area (AMA): The restricted area reserved specifically for aircraft and the arrival/departure operation of the airport; Runways, Taxiways, Aprons, and the Transitional Surface controlled by the Tower and FAA.
CONSTRUCTION SAFETY PHASING PLAN
Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

Airport Operations Area (AOA): Any area of the airport used or intended to be used for landing, takeoff, or surface movement of aircraft. An air operations area includes such paved and unpaved areas that are used or intended to be used for the unobstructed movement of aircraft.

Apron: The pavement area adjacent to buildings or terminals where aircraft load or unload passengers or cargo. This may also be referred to as the ramp or tarmac.

Approach Surface: A surface longitudinally centered on the extended runway centerline and extending outward and upward from either a runway threshold or 200 feet behind a threshold. This surface is needed to define where unobstructed airspace above it begins.

Boise Airport (BOI): Boise Airport is located in Boise, Idaho and is also known as Gowen Field.

Foreign Object Debris (FOD): Foreign items found on the runways, taxiways and tramp areas that could cause damage to an aircraft, be ingested by an aircraft engine or become airborne and cause injury to airport personnel.

Navigational Aids (Navaids): Visual or electronic devices, in the aircraft or on land, which provide vector guidance information or position data to aircraft in flight.

Notice to Airmen (NOTAM): A notice to the flying public (airmen) through the FAA’s NOTAM system. Issuance of the NOTAM concerning this project will be coordinated through the Airport Operations.

Object Free Area: A two-dimensional ground area surrounding runways, taxiways and taxi lanes that are clear of objects, except for objects whose location is fixed by function.

Safety Area: The surface adjacent to runway, taxiways and taxi lanes, over which aircraft and emergency vehicles should, in dry weather, be able to cross at normal operation speeds without incurring significant damage, a safety area is graded, drained and compacted. It is free of any holes, trenched, or other significant surface variation or object.

Secure Area: The area of the airport within the perimeter fencing, passenger sterile (screened) area, and secured facility exits separating landside and airside operations.

Ground Control: ATCT personnel monitor and direct airport traffic on the ground in the AOA.
CONSTRUCTION SAFETY PHASING PLAN
Project: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

I. Safety Standards

Contractor personnel, airport staff and field inspectors directly involved in on-airport construction shall:

   a) Be aware of the types of conditions, safety problems, and/or hazards identified each day at the airport. To insure that all personnel are aware, daily meetings between supervisory personnel and their employees shall be scheduled prior to any work commencing on the shift.

   b) Inspect all work, and/or storage areas daily for which they are responsible to be aware of current conditions.

   c) Promptly take steps needed to remedy any unsafe or potentially unsafe conditions discovered. Coordinate with construction management or supervisory personnel, airport staff and project inspectors to insure immediate corrective action is undertaken.

The Contractor shall be required to coordinate work in compliance with the FAA’s Advisory Circular 150/5370-2G, “Operational Safety on Airports During Construction”. AC 150/5370-2G sets forth guidelines for maintaining desired levels of operational safety during construction. Potential hazardous conditions which may occur during construction include, but are not limited to the following:

1. Trenches, holes, or open excavations on or adjacent to any active runway, taxiway, taxi lane, apron, or any related safety areas.

2. Any unmarked or unlighted trenches, holes, or open excavations.

3. Mounds or stockpiles of earth, construction materials, temporary structures, or other objects on or in the vicinity of any active runway, taxiway, taxi lane, apron or related safety area which may intrude into the Object Free Areas, related Safety Areas, or limit required lines of sight.

4. Pavement drop-offs, which would cause, if crossed at normal operation speed, damage to aircraft that normally use the airport. The maximum pavement drop off is 3 inches.

5. Vehicles or equipment, either for operation or idle, on any active runway, taxiway, taxi lane, apron or related safety area, approach, or departure areas.

6. Vehicles, equipment, excavations, stockpiles, or other materials, which would impinge upon any NAVAID critical areas and degrade or otherwise interfere with electronic NAVAID’s or interfere with visual NAVAID facilities.

7. Unmarked utility, NAVAID, weather service, runway lighting, underground power or signal cables that could be damaged during construction.

8. Objects or activities anywhere on or in the vicinity of an airport which would be distracting, confusing, or alarming to pilots during aircraft operations.

9. Un flagged/unlighted low visibility items such as tall cranes, backhoes, scrapers, dump trucks, rollers, compactors, dozers and the like in the vicinity of an active runway, taxiway, taxi lane, apron or related safety area, approach, or departure areas.

10. Dirt, debris, or other transient accumulations, which temporarily obscure pavement markings, pavement edges, or derogate the visibility of runway/taxiway markings or lighting or of construction and maintenance areas.

11. Trash or other materials with foreign object damage (FOD) potential, whether on runway, taxiway, taxi lane, apron or related safety areas.

12. Failure to maintain radio communication with air traffic control.
13. Construction activities or material, which could hamper Aircraft Rescue and Fire Fighting vehicle access from ARFF stations to all parts of the runway/taxiway system, runway approach and departure areas, or aircraft parking locations.

14. Inadequate fencing or other markings to separate construction areas from open aircraft operational areas. Light weight frangible barricades and/or flagging should be used to delineate the limits of construction near open trenches or excavations.

15. Bird attractions such as food scraps and other trash, grass seeding, or ponding water on the airport.

16. Improper or malfunctioning lights or unlighted airport hazards.

17. Holes, obstacles, loose pavement, trash and other debris on or near airport operation areas and in construction areas that could present a hazard to aircraft, equipment, and personnel.

18. Failure to maintain fencing during construction to deter unauthorized intrusions into the AOA.
GENERAL NOTES:
1. Phase 1A and 2b mill overlay and Phase 2A mill overlay are for construction access.
2. Construction shall be performed during non-operating hours of the airport.
3. Phase 1A and 2b shall be closed for the days of construction. The start of Phase 1A is 8 PM on October 27th and Phase 2b is 8 PM on October 27th and 8 PM on October 28th.
4. Phase 1A and 2b shall be closed for the 7 day duration of construction.
5. Phases 1A and 2b shall be closed for 8PM to 8AM.

PHASE MILESTONES:
- Phase 1A:
  - Construction start: October 27th at 8PM
  - Construction end: October 28th at 8AM
- Phase 2b:
  - Construction start: October 27th at 8PM
  - Construction end: October 28th at 8AM

BARRICADE NOTES:
1. Barricades shall be installed at the exterior edges of the parking area. The barricades shall be removed on the completion of the parking area and shall not interfere with the parking area or driver's ability to maneuver. The barricades shall be removed and shall comply with the City of Boise's requirements.
2. The barricades shall be placed in the center of the parking area and shall not interfere with the parking area or driver's ability to maneuver. The barricades shall be removed and shall comply with the City of Boise's requirements.
3. The barricades shall be placed in the center of the parking area and shall not interfere with the parking area or driver's ability to maneuver. The barricades shall be removed and shall comply with the City of Boise's requirements.
PHASE 1A

REALIGNMENT OF TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (FEDERAL):

REALIGNMENT OF TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):

UPS K-LOADER PADS

PHASING NOTES:

1. COMPARE WITH Exhibit 10-10 and Exhibit 10-10 A

2. RUNWAY 10-28 L/G is 250' past the last 60' of runway 10R.

3. PREPARATION OF GROUND FOR CONCRETE MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

GENERAL NOTES:

1. TRAFFIC BREAK OFF DURING MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

2. MILL OR OVERLAY WORK ON 10-28 R/G

KEYMAP

temporary access road

RS&H, INC.
5215 Wiley Post Way, Suite 510
Salt Lake City, UT 84116
801.924.8555
www.rsandh.com

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED FOR BID

SHEET OF

80

Packet Pg. 297

Attachment: FB 20-207 Specifications (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife...
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (FEDERAL):

SCHEDULE II (NON-FEDERAL):

UPS K-LOADER PADS

PHASING NOTES:
1. DRAWN BY:

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

FEBRUARY 26, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED FOR BID

SHEET OF

80

225-0005-022

SCHEDULE I

PACKET PG. 299

REVISIONS

RECORD NO.
DESCRIPTION
DATE

DATE ISSUED:
REVIEWED BY:
DRAWN BY:
DESIGNED BY:

FEBRUARY 26, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED FOR BID

SCHEDULE I
(FEDERAL):
REALIGNMENT TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER PADS

PHASING NOTES:
1. PHASE 1C - SEE PACKAGE 12 FOR PHASE 1C COORDINATES

GENERAL NOTES:
1. TRAFFIC SAFETY WORK SHALL BE LINED OUT PRIOR TO COMMENCEMENT OF WORK
2. WORK SHALL BE RENEWED AT ALL TIMES DURING WORK
3. WORK TO BE COMPLETED IN ONE CONTINUOUS EIGHT (8) HOUR PERIOD
4. ALL ROAD WORK TO BE COMPLETED IN ONE CONTINUOUS EIGHT (8) HOUR PERIOD

PACKET PG. 300

REALIGNMENT TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

PHASING NOTED:
1. Phases 1A, 1B, & 1C shall be performed for the arriving aircraft. Phase 1D shall be performed for the departing aircraft. Phases 1E, 1F, & 1G shall be performed for both arriving and departing aircraft.
2. Phases 2A & 2B shall be performed for both arriving and departing aircraft.

GENERAL NOTED:
1. All work performed shall be in accordance with the specifications and instructions provided with the Bid Documents.
2. All work shall be inspected at all times, prior to proceeding to the next zone.

SCHEDULE I (FEDERAL):

REALIGNMENT TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):

UPS K-LOADER PADS

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED FOR BID

Packet Pg. 303

Attachment: FB 20-207 Specifications (E) (RES-153-20 ; FB 20-207; Realignment of Taxiway H, Mill/Overlay Portions of Taxiways J & B, Knife

KEYMAP
<table>
<thead>
<tr>
<th>REVISIONS</th>
<th>NO.</th>
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**DATE ISSUED:**

**REVIEWED BY:**

**DRAWN BY:**

**DESIGNED BY:**

**FEBRUARY 26, 2020**

**RS&H PROJECT NUMBER**

**SHEET TITLE**

**DRAWING NUMBER**

**ISSUED FOR BID**

**SCHEDULE I (FEDERAL):**

- REALIGNMENT TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

**SCHEDULE II (NON-FEDERAL):**

- UPS K-LOADER PADS

**LEGEND:**

- **Temporary Taxiway Centerline Marking Detail**

**NOTES:**

1. **Temporary VSR Marking Detail**

2. **Temporary Pavement Marking Detail**

**04.B.1.b Packet Pg. 304**

**Attachment:** FB 20-207 Specifications (E) (RES-153-20 ; FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B)
ITEM C-100 CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

DESCRIPTION

100-1 General. Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose. The Contractor shall establish a CQCP that will:

a. Provide qualified personnel to develop and implement the CQCP.

b. Provide for the production of acceptable quality materials.

c. Provide sufficient information to assure that the specification requirements can be met.

d. Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR or Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner’s representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:


b. Discussion of the QA program.

c. Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.

d. Establish regular meetings to discuss control of materials, methods and testing.

e. Establishment of the overall QC culture.

100-2 Description of program.

a. General description. The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.

b. Contractor Quality Control Program (CQCP). The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production,
construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least 10 calendar days before the CQCP Workshop. The Contractor’s CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff
2. Project progress schedule
3. Submittals schedule
4. Inspection requirements
5. QC testing plan
6. Documentation of QC activities and distribution of QC reports
7. Requirements for corrective action when QC and/or QA acceptance criteria are not met
8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

100-3 CQCP organization. The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel. The organizational chart shall identify all QC staff by name and function, and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

a. Program Administrator. The Contractor Quality Control Program Administrator (CQCPA) must be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

(1) Professional Engineer with one (1) year of airport paving experience.
(2) Engineer-in-training with two (2) years of airport paving experience.
(3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience.
(4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or...
processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. QC technicians. A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsmen with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher, and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

1. Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.
2. Performance of all QC tests as required by the technical specifications and paragraph 100-8.
3. Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. Staffing levels. The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The CQCP shall state where different technicians will be required for different work elements.

100-4 Project progress schedule. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, Execution and Progress.

100-5 Submittals schedule. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

a. Specification item number
b. Item description
c. Description of submittal
d. Specification paragraph requiring submittal
e. Scheduled date of submittal

100-6 Inspection requirements. QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these and other QC functions will be accomplished and used.

b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and
tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

100-7 Contractor QC testing facility.

   a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials:

   • 8.1.3 Equipment Calibration and Checks;
   • 8.1.9 Equipment Calibration, Standardization, and Check Records;
   • 8.1.12 Test Methods and Procedures

   b. For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation:

   • 7 Test Methods and Procedures
   • 8 Facilities, Equipment, and Supplemental Procedures

100-8 QC testing plan. As part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes. The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

   a. Specification item number (e.g., P-401)
   b. Item description (e.g., Hot Mix Asphalt Pavements)
   c. Test type (e.g., gradation, grade, asphalt content)
   d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)
   e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)
   f. Responsibility (e.g., plant technician)
   g. Control requirements (e.g., target, permissible deviations)

The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.

All QC test results shall be documented by the Contractor as required by paragraph 100-9.

100-9 Documentation. The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCPA.
Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

**a. Daily inspection reports.** Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician’s daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:

1. Technical specification item number and description
2. Compliance with approved submittals
3. Proper storage of materials and equipment
4. Proper operation of all equipment
5. Adherence to plans and technical specifications
6. Summary of any necessary corrective actions
7. Safety inspection.
8. Photographs and/or video

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

**b. Daily test reports.** The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

1. Technical specification item number and description
2. Test designation
3. Location
4. Date of test
5. Control requirements
6. Test results
7. Causes for rejection
8. Recommended remedial actions
9. Retests

Test results from each day’s work period shall be submitted to the RPR prior to the start of the next day’s work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

**100-10 Corrective action requirements.** The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.
100-11 Inspection and/or observations by the RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose. Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor’s or subcontractor’s work.

100-12 Noncompliance.

a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

   (1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or

   (2) Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

100-13 Basis of measurement and payment. Contractor Quality Control Program (CQCP) is for the personnel, tests, facilities and documentation required to implement the CQCP. The CQCP will be paid as a lump sum with the following schedule of partial payments:

a. With first pay request, 25% with approval of CQCP and completion of the Quality Control (QC)/Quality Assurance (QA) workshop.

b. When 25% or more of the original contract is earned, an additional 25%.

c. When 50% or more of the original contract is earned, an additional 20%.

d. When 75% or more of the original contract is earned, an additional 20%.

e. After final inspection and acceptance of project, the final 10%.

BASIS OF PAYMENT

100-14 Payment will be made under:

Item C-100-14.1 Contractor Quality Control Program (CQCP) – per lump sum

Item C-100-14.2 Permitting Allowance – per allowance

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)
<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM C1077</td>
<td>Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation</td>
</tr>
<tr>
<td>ASTM D3665</td>
<td>Standard Practice for Random Sampling of Construction Materials</td>
</tr>
<tr>
<td>ASTM D3666</td>
<td>Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials</td>
</tr>
</tbody>
</table>

**END OF ITEM C-100**
ITEM C-102 TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL

DESCRIPTION

102-1. This item shall consist of temporary control measures as shown on the plans or as ordered by the Resident Project Representative (RPR) during the life of a contract to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary erosion control shall be in accordance with the approved erosion control plan; the approved Construction Safety and Phasing Plan (CSPP) and AC 150/5370-2, Operational Safety on Airports During Construction. The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be designed, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

MATERIALS

102-2.1 Grass. Grass that will not compete with the grasses sown later for permanent cover per Item T-901 shall be a quick-growing species (such as ryegrass, Italian ryegrass, or cereal grasses) suitable to the area providing a temporary cover. Selected grass species shall not create a wildlife attractant.

102-2.2 Mulches. Mulches may be hay, straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of noxious weeds and deleterious materials per Item T-908. Mulches shall not create a wildlife attractant.

102-2.3 Fertilizer. Fertilizer shall be a standard commercial grade and shall conform to all federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

102-2.4 Slope drains. Slope drains may be constructed of pipe, fiber mats, rubble, concrete, asphalt, or other materials that will adequately control erosion.

102-2.5 Silt fence. Silt fence shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life. Silt fence shall meet the requirements of ASTM D6461.

102-2.6 Other. All other materials shall meet commercial grade standards and shall be approved by the RPR before being incorporated into the project.

CONSTRUCTION REQUIREMENTS

102-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

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The RPR shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

102-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules in accordance with the approved Construction Safety and Phasing Plan (CSPP) and the plans for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the RPR.

102-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the plans and approved CSPP. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately if project conditions permit. Temporary erosion control measures are required if permanent measures cannot immediately follow grading operations. The RPR shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor’s capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the RPR.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the RPR. If temporary erosion and pollution control measures are required due to the Contractor’s negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the RPR, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The RPR may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be maintained by the Contractor during the construction period.

Provide temporary structures whenever construction equipment must cross watercourses at frequent intervals. Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

102-3.4 Installation, maintenance and removal of silt fence. Silt fences shall extend a minimum of 16 inches (41 cm) and a maximum of 34 inches (86 cm) above the ground surface. Posts shall be set no more than 10 feet (3 m) on center. Filter fabric shall be cut from a continuous roll to the length required minimizing joints where possible. When joints are necessary, the fabric shall be spliced at a support post with a minimum 12-inch (300-mm) overlap and securely sealed. A trench shall be excavated approximately 4 inches (100 mm) deep by 4 inches (100 mm) wide on the upslope side of the silt fence. The trench shall be backfilled and the soil compacted over the silt fence fabric. The Contractor shall
remove and dispose of silt that accumulates during construction and prior to establishment of permanent erosion control. The fence shall be maintained in good working condition until permanent erosion control is established. Silt fence shall be removed upon approval of the RPR.

**METHOD OF MEASUREMENT**

102-4.1 Temporary erosion and pollution control work required will be performed as scheduled or directed by the RPR. Completed and accepted work will be measured as follows:

a. Preparation of the stormwater pollution prevention plan shall be measured per lump sum.

b. Implementation of the approved stormwater pollution prevention plan allowance shall be measured per lump sum.

102-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor.

**BASIS OF PAYMENT**

102-5.1 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the RPR and measured as provided in paragraph 102-4.1 will be paid for under:

Item C-102-5.1 Storm Water Pollution Prevention Plan (SWPPP) .............. Per Lump Sum

Item C-102-5.2 Implement Approved SWPPP Allowance ........................... Per Lump Sum

Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

Temporary control features not covered by contract items that are ordered by the RPR will be paid for in accordance with Section 90, paragraph 90-05 *Payment for Extra Work*.

**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5200-33 *Hazardous Wildlife Attractants on or Near Airports*

AC 150/5370-2 *Operational Safety on Airports During Construction*

ASTM International (ASTM)

ASTM D6461 *Standard Specification for Silt Fence Materials*

United States Department of Agriculture (USDA)

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

**END OF ITEM C-102**
ITEM C-105 MOBILIZATION

DESCRIPTION

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to 10 percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster “Equal Employment Opportunity is the Law” in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL “Notice to All Employees” Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 Engineer/RPR field office. An Engineer/RPR field office is not required.

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for “Mobilization” partial payments will be allowed as follows:

<table>
<thead>
<tr>
<th>Percent of Contract Amount Earned*</th>
<th>Allowable Percent Of the Lump Sum Price for the Item*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>25</td>
<td>75</td>
</tr>
<tr>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

* The Percent of Contract Amount Earned equals the work completed to date (including the total of all previous mobilization) plus or minus work completed associated with executed change orders, if any, divided by the Total Original Contract Amount plus or minus the Total Executed Change Order Amounts, if any.
BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105-6.1 Mobilization ................................................................. Per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended
EEEOP/P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105
ITEM C-110 METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS (PWL)

DESCRIPTION

110-1 General. When the specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (X) and sample standard deviation (S_n) of the specified number (n) of sublots for the lot and the specification tolerance limits, L for lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index, Q_L for Lower Quality Index and/or Q_U for Upper Quality Index, is computed and the PWL for the lot for the specified n is determined from Table 1. All specification limits specified in the technical sections shall be absolute values. Test results used in the calculations shall be to the significant figure given in the test procedure.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor’s risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner’s risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the Contractor that, in order to consistently offset the Contractor’s risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. In all cases, it is the responsibility of the Contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

110-2 Method for computing PWL. The computational sequence for computing PWL is as follows:

a. Divide the lot into n sublots in accordance with the acceptance requirements of the specification.

b. Locate the random sampling position within the sublot in accordance with the requirements of the specification.

c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.

d. Find the sample average (X) for all sublot test values within the lot by using the following formula:

\[ X = \frac{(x_1 + x_2 + x_3 + \ldots + x_n)}{n} \]

Where: \( X \) = Sample average of all sublot test values within a lot
\( x_1, x_2, \ldots, x_n \) = Individual sublot test values
\( n \) = Number of sublot test values

e. Find the sample standard deviation (S_n) by use of the following formula:

\[ S_n = \left[ \frac{(d_1^2 + d_2^2 + d_3^2 + \ldots + d_n^2)}{(n-1)} \right]^{1/2} \]

Where: \( S_n \) = Sample standard deviation of the number of sublot test values in the set
d_1, d_2, \ldots d_n = \text{Deviation of the individual sublot test values } x_1, x_2, \ldots \text{ from the average value } \bar{x}

\text{that is: } d_1 = (x_1 - \bar{x}), d_2 = (x_2 - \bar{x}) \ldots d_n = (x_n - \bar{x})

n = \text{Number of sublot test values}

f. For single sided specification limits (i.e., L only), compute the Lower Quality Index Q_L by use of the following formula:

\[ Q_L = \frac{(X - L)}{S_n} \]

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L, using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

g. For double-sided specification limits (i.e., L and U), compute the Quality Indexes Q_L and Q_U by use of the following formulas:

\[ Q_L = \frac{(X - L)}{S_n} \]
\[ Q_U = \frac{(U - X)}{S_n} \]

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U, using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_U and percent of material below P_L for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher value of P_L or P_U. Determine the PWL by use of the following formula:

\[ \text{PWL} = (P_U + P_L) - 100 \]

Where: P_L = percent within lower specification limit

P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project
Test Item: Item P-401, Lot A.
A. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.
   A-1 = 96.60
   A-2 = 97.55
   A-3 = 99.30
   A-4 = 98.35
   n = 4

2. Calculate average density for the lot.
   \[ X = \frac{(x_1 + x_2 + x_3 + \ldots + x_n)}{n} \]
   \[ X = \frac{(96.60 + 97.55 + 99.30 + 98.35)}{4} \]
X = 97.95% density

3. Calculate the standard deviation for the lot.
\[ S_n = \sqrt{\left( (96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2 \right) / (4 - 1)}}^{1/2} \]
\[ S_n = \sqrt{\left( (1.82^2 + 0.16^2 + 1.82^2 + 0.16^2) / 3 \right)}^{1/2} \]
\[ S_n = 1.15 \]

4. Calculate the Lower Quality Index \( Q_L \) for the lot. (L=96.3)
\[ Q_L = (X - L) / S_n \]
\[ Q_L = (97.95 - 96.30) / 1.15 \]
\[ Q_L = 1.4348 \]

5. Determine PWL by entering Table 1 with \( Q_L = 1.44 \) and \( n = 4 \).
\[ PWL = 98 \]

B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.
   A-1 = 5.00
   A-2 = 3.74
   A-3 = 2.30
   A-4 = 3.25

2. Calculate the average air voids for the lot.
   \[ X = \frac{(x_1 + x_2 + x_3 + \ldots + x_n)}{n} \]
   \[ X = \frac{(5.00 + 3.74 + 2.30 + 3.25)}{4} \]
   \[ X = 3.57\% \]

3. Calculate the standard deviation \( S_n \) for the lot.
   \[ S_n = \sqrt{\left( (3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2 \right) / (4 - 1)}}^{1/2} \]
   \[ S_n = \sqrt{\left( (2.04^2 + 0.03^2 + 1.62^2 + 0.10^2) / 3 \right)}^{1/2} \]
   \[ S_n = 1.12 \]

4. Calculate the Lower Quality Index \( Q_L \) for the lot. (L= 2.0)
   \[ Q_L = (X - L) / S_n \]
   \[ Q_L = (3.57 - 2.00) / 1.12 \]
   \[ Q_L = 1.3992 \]

5. Determine \( P_L \) by entering Table 1 with \( Q_L = 1.41 \) and \( n = 4 \).
   \[ P_L = 97 \]

6. Calculate the Upper Quality Index \( Q_U \) for the lot. (U= 5.0)
   \[ Q_U = (U - X) / S_n \]
   \[ Q_U = (5.00 - 3.57) / 1.12 \]
   \[ Q_U = 1.2702 \]

7. Determine \( P_U \) by entering Table 1 with \( Q_U = 1.29 \) and \( n = 4 \).
   \[ P_U = 93 \]

8. Calculate Air Voids PWL
   \[ PWL = (P_L + P_U) - 100 \]
WSL = (97 + 93) - 100 = 90

EXAMPLE OF OUTLIER CALCULATION (REFERENCE ASTM E178)

Project: Example Project
Test Item: Item P-401, Lot A.

A. Outlier Determination for Mat Density.

1. Density of four random cores taken from Lot A arranged in descending order.
   
   A-3 = 99.30
   A-4 = 98.35
   A-2 = 97.55
   A-1 = 96.60

2. From ASTM E178, Table 1, for n=4 an upper 5% significance level, the critical value for test criterion = 1.463.

3. Use average density, standard deviation, and test criterion value to evaluate density measurements.

   a. For measurements greater than the average:
      
      If (measurement - average)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.
      
      For A-3, check if (99.30 - 97.95) / 1.15 is greater than 1.463.
      
      Since 1.174 is less than 1.463, the value is not an outlier.

   b. For measurements less than the average:
      
      If (average - measurement)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.
      
      For A-1, check if (97.95 - 96.60) / 1.15 is greater than 1.463.
      
      Since 1.435 is less than 1.463, the value is not an outlier.

Note: In this example, a measurement would be considered an outlier if the density were:

   Greater than (97.95 + 1.463 × 1.15) = 99.63%

   OR

   less than (97.95 - 1.463 × 1.15) = 96.27%.

<table>
<thead>
<tr>
<th>Percent Within Limits (P_L and P_U)</th>
<th>Positive Values of Q (Q_L and Q_U)</th>
</tr>
</thead>
<tbody>
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<td>n=3</td>
<td>n=4</td>
</tr>
<tr>
<td>99</td>
<td>1.1541</td>
</tr>
<tr>
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<tr>
<td>90</td>
<td>1.0982</td>
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<tr>
<td>89</td>
<td>1.0864</td>
</tr>
</tbody>
</table>
4.B.1.b
FAA 150/5370-10H

Percent
Within Limits
(PL and PU)
88
87
86
85
84
83
82
81
80
79
78
77
76
75
74
73
72
71
70
69
68
67
66
65
64
63
62
61
60
59
58
57
56
55
54
53
52
51
50
Percent
Within Limits
(PL and PU)
49
48
47
46

Positive Values of Q (QL and QU)
n=3

n=4

n=5

n=6

n=7

n=8

n=9

n=10

1.0736
1.0597
1.0448
1.0288
1.0119
0.9939
0.9749
0.9550
0.9342
0.9124
0.8897
0.8662
0.8417
0.8165
0.7904
0.7636
0.7360
0.7077
0.6787
0.6490
0.6187
0.5878
0.5563
0.5242
0.4916
0.4586
0.4251
0.3911
0.3568
0.3222
0.2872
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0.2164
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0.0725
0.0363
0.0000

1.1400
1.1100
1.0800
1.0500
1.0200
0.9900
0.9600
0.9300
0.9000
0.8700
0.8400
0.8100
0.7800
0.7500
0.7200
0.6900
0.6600
0.6300
0.6000
0.5700
0.5400
0.5100
0.4800
0.4500
0.4200
0.3900
0.3600
0.3300
0.3000
0.2700
0.2400
0.2100
0.1800
0.1500
0.1200
0.0900
0.0600
0.0300
0.0000

1.1537
1.1173
1.0817
1.0467
1.0124
0.9785
0.9452
0.9123
0.8799
0.8478
0.8160
0.7846
0.7535
0.7226
0.6921
0.6617
0.6316
0.6016
0.5719
0.5423
0.5129
0.4836
0.4545
0.4255
0.3967
0.3679
0.3392
0.3107
0.2822
0.2537
0.2254
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0.1125
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0.0562
0.0281
0.0000

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1.1192
1.0808
1.0435
1.0071
0.9715
0.9367
0.9025
0.8690
0.8360
0.8036
0.7716
0.7401
0.7089
0.6781
0.6477
0.6176
0.5878
0.5582
0.5290
0.4999
0.4710
0.4424
0.4139
0.3856
0.3575
0.3295
0.3016
0.2738
0.2461
0.2186
0.1911
0.1636
0.1363
0.1090
0.0817
0.0544
0.0272
0.0000

1.1613
1.1199
1.0800
1.0413
1.0037
0.9671
0.9315
0.8966
0.8625
0.8291
0.7962
0.7640
0.7322
0.7009
0.6701
0.6396
0.6095
0.5798
0.5504
0.5213
0.4924
0.4638
0.4355
0.4073
0.3793
0.3515
0.3239
0.2964
0.2691
0.2418
0.2147
0.1877
0.1607
0.1338
0.1070
0.0802
0.0534
0.0267
0.0000

1.1630
1.1204
1.0794
1.0399
1.0015
0.9643
0.9281
0.8928
0.8583
0.8245
0.7915
0.7590
0.7271
0.6958
0.6649
0.6344
0.6044
0.5747
0.5454
0.5164
0.4877
0.4592
0.4310
0.4030
0.3753
0.3477
0.3203
0.2931
0.2660
0.2391
0.2122
0.1855
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0.1322
0.1057
0.0793
0.0528
0.0264
0.0000

1.1643
1.1208
1.0791
1.0389
1.0000
0.9624
0.9258
0.8901
0.8554
0.8214
0.7882
0.7556
0.7236
0.6922
0.6613
0.6308
0.6008
0.5712
0.5419
0.5130
0.4844
0.4560
0.4280
0.4001
0.3725
0.3451
0.3179
0.2908
0.2639
0.2372
0.2105
0.1840
0.1575
0.1312
0.1049
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n=7

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n=9

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CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND
MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

C-110-5

TECHNICAL SPECIFICATIONS
FEBRUARY 26, 2020
ISSUED FOR BID


RS&H

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4.B.1.b
FAA 150/5370-10H

Percent
Within Limits
(PL and PU)
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44
43
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CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND
MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

C-110-6

TECHNICAL SPECIFICATIONS
FEBRUARY 26, 2020
ISSUED FOR BID


RS&H

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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)
ASTM E178 Standard Practice for Dealing with Outlying Observations

END OF ITEM C-110
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ITEM P-101 PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement. The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

   a. Concrete pavement removal. Not used.

   b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. The pavement shall be removed so the joint for each layer of pavement replacement is offset 1 foot from the joint in the preceding layer. This does not apply if the removed pavement is to be replaced with concrete or soil. If the material is to be wasted on the airport site, it shall be broken to a maximum size of 3/4 inches.

   c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch. If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch, not to exceed ¼ inch. Any excess joint or crack sealer shall be removed from the pavement surface.

Wider cracks (over 1-1/2 inch wide), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.
### GRADATION

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</tr>
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<td>15-30</td>
</tr>
<tr>
<td>No. 200</td>
<td>10-20</td>
</tr>
</tbody>
</table>

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the RPR.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inches of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

#### 101-3.3 Removal of Foreign Substances/contaminates prior to overlay.

Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

Chemicals, high-pressure water, heater scarifier (asphaltic concrete only), cold milling, or sandblasting may be used. If chemicals are used, they shall comply with the state’s environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor’s expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

#### 101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. **Repair of concrete spalls in areas to be overlaid with asphalt.** Not used.

b. **Asphalt pavement repair.** The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

#### 101-3.5 Cold milling.

Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade...
and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport property. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor’s Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor’s Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of 7 feet and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed off the airport.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property.


101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor’s expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Not used.

101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with router by removing a minimum of 1/16 inch from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Crack Sealant. Not used.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Item P-605.

101-3.9.4 Removal of Pipe and other Buried Structures. Not used.

a. Removal of Existing Pipe Material. Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D1557.

b. Removal of Inlets/Manholes. Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 95% of ASTM D1557, when outside of paved areas must be compacted to 95% of ASTM D698.
METHOD OF MEASUREMENT

101-4.1 2-Inch Depth Asphalt Pavement Milling. The unit of measurement for 2-Inch Depth Asphalt Pavement Milling shall be the number of square yards including base material removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

101-4.2 2.5-Inch Depth Asphalt Pavement Milling. The unit of measurement for 2.5-Inch Depth Asphalt Pavement Milling shall be the number of square yards including base material removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

101-4.3 3-Inch Depth Asphalt Pavement Milling. The unit of measurement for 3-Inch Depth Asphalt Pavement Milling shall be the number of square yards including base material removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

101-4.4 Runway Lap Joint Mill. The unit of measurement for Runway Lap Joint Mill shall be the number of square yards including base material removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

101-4.5 Full Depth Asphalt Removal. The unit of measurement for full-depth asphalt removal shall be the number of square yards of existing pavement removed by the Contractor. Any material removed outside the limits of removal because the area was damaged by the negligence on the part of the Contractor shall not be included in the measurement for payment.

101-4.6 Full Depth Asphalt/PCC Removal. The unit of measurement for full-depth asphalt and PCC removal shall be the number of square yards of existing pavement removed by the Contractor. Any material removed outside the limits of removal because the area was damaged by the negligence on the part of the Contractor shall not be included in the measurement for payment.

101-4.7 Pavement Marking Blackout. The unit of measurement for pavement marking blackout shall be the number of square feet of existing pavement marking requiring blackout. Any material removed outside the limits of removal because the area was damaged by the negligence on the part of the Contractor shall not be included in the measurement for payment.

101-4.8 Pavement Marking Obliteration. The unit of measurement for pavement marking obliteration shall be the number of square feet of existing pavement marking requiring obliteration. Any material removed outside the limits of removal because the area was damaged by the negligence on the part of the Contractor shall not be included in the measurement for payment.

101-4.9 Crack repair. The unit of measurement for joint and crack repair shall be the linear foot of crack repaired.

101-4.10 Removal of Bituminous Pavement. The unit of measure for 1-1/2” Crushed Drained Rock Placement 4 inches nominal depth of milling per square yard.

101-4.11 Crushed Drained Rock Placement 4-Inch Nominal Depth. The unit of measure for Crushed Drained Rock Placement of 4-Inches Nominal Depth shall be the number of square yards of rock placed.
BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P-101-5.1 2-Inch Depth Asphalt Pavement Milling – per square yard
Item P-101-5.2 2.5-Inch Depth Asphalt Pavement Milling – per square yard
Item P-101-5.3 3-Inch Depth Asphalt Pavement Milling – per square yard
Item P-101-5.4 Runway Lap Joint Mill – per square yard
Item P-101-5.5 Full-Depth Asphalt Removal – per square yard
Item P-101-5.6 Full-Depth Asphalt/PCC Removal – per square yard
Item P-101-5.7 Pavement Marking Blackout – per square foot
Item P-101-5.8 Pavement Marking Obliteration – per square foot
Item P-101-5.9 Crack Repair – per linear foot
Item P-101-5.10 Removal of Bituminous Pavement – per square yard
Item P-101-5.11 Crushed Drained Rock Placement 4-Inch Nominal Depth – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

ASTM International (ASTM)
ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

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ITEM P-105  TEMPORARY CONSTRUCTION ITEMS

DESCRIPTION

105-1.1 This item consists of furnishing all labor, materials and equipment for temporary construction items necessary for the safe and proper execution of work and not otherwise included in other contract bid items. The Contractor will be expected to supply and utilize the items listed below and other items contained in the plans and specifications. Temporary construction items to be provided include, but are not limited to the following: flaggers, gate guards, construction barricades, test pitting, and men and equipment as needed to keep all areas free of debris.

MATERIALS

105-2.1 CONSTRUCTION BARRICADES. Type 1 – Low Profile Construction Barricades, lights and flags shall be supplied by the Owner. The Contractor shall provide and maintain flags/dowels/batteries (as necessary) and water for ballast of the barricades. Type 2 and Type 3 construction barricades shall be provided by Contractor. All barricades shall be placed (setup and take down) by the Contractor and in accordance with the phasing plans and phasing notes provided in the drawing set.

105-2.2 OTHER MISCELLANEOUS ITEMS. Any other items not listed herein but which are associated directly or indirectly with temporary construction related work shall, by reference, be included in the requirements of this specification. No additional payment will be made for any temporary construction related item not specifically listed herein. The Contractor shall be responsible for providing any and all items necessary to ensure a safe, secure and functioning project construction site.

CONSTRUCTION METHODS

105-3.1 CONSTRUCTION BARRICADES. Barricades shall be placed around each phase of the work in accordance with the phasing plans and shall remain in place until completion of work in each phase.

105-3.2 FLAGGERS. Flaggers shall be provided, as necessary, to control the Contractor's traffic during the prosecution of work. All Contractor vehicles or equipment that are required to cross active airfield pavement or safety areas shall do so under the direct control of a competent flagger.

105-3.3 GATE GUARDS. The Contractor shall provide Airport badged gate guards, as necessary, at each AOA gate utilized during construction for the duration of the project. Gate guards shall be responsible for ensuring there is no unauthorized entry into the AOA through the construction access gates. Gate guards shall be in place during all times the gates are being utilized by the Contractor and/or subcontractors.

METHOD OF MEASUREMENT

105-4.1 No direct measurement will be made for temporary construction items including, but not limited to, flaggers, gate guards, construction barricades, test pitting, and men and equipment as needed to keep all areas free of debris. Payment will be made on a lump sum basis.

BASIS OF PAYMENT

105-5.1 Payment will be made at the lump sum bid price for "Temporary Construction Items." This payment shall be full compensation for furnishing all materials and labor for placing, moving and removing construction barricades, providing flaggers, gate guards, test pitting, and for any other labor, materials, equipment, tools and incidentals necessary for temporary items required for construction of this work.
Payment for these items will be made in installments. The first payment of 10 percent of the lump sum price will be included in the first progress estimate following the initiation of construction work. The remaining 90 percent of the lump sum price will be included as installments in subsequent progress estimates. Each such installment will be determined based on the ratio of the total work completed to date of the total contract amount.

Payment will be made under:

Item P-105-5.1 Temporary Construction Items..............................................Per Lump Sum

END OF ITEM P-105
ITEM P-151 CLEARING AND GRUBBING

DESCRIPTION

151-1.1 This item shall consist of clearing or clearing and grubbing, including the disposal of materials, for all areas within the limits designated on the plans or as required by the Resident Project Representative (RPR).

a. Clearing shall consist of the cutting and removal of all trees, stumps, brush, logs, hedges, the removal of fences and other loose or projecting material from the designated areas. The grubbing of stumps and roots will not be required.

b. Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which in the opinion of the RPR is unsuitable for the foundation of strips, pavements, or other required structures, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing.

c. Tree Removal. Tree Removal shall consist of the cutting and removal of isolated single trees or isolated groups of trees, and the grubbing of stumps and roots. The removal of all the trees of this classification shall be in accordance with the requirements for the particular area being cleared.

CONSTRUCTION METHODS

151-2.1 General. The areas denoted on the plans to be cleared shall be staked on the ground by the Contractor as indicated on the plans.

The removal of existing structures and utilities required to permit orderly progress of work shall be accomplished by local agencies, unless otherwise shown on the plans. Whenever a telephone pole, pipeline, conduit, sewer, roadway, or other utility is encountered and must be removed or relocated, the Contractor shall advise the RPR who will notify the proper local authority or owner to secure prompt action.

151-2.1.1 Disposal. All materials removed by clearing or by clearing and grubbing shall be disposed of in the designated waste disposal area, except when otherwise directed by the RPR. As far as practicable, waste concrete and masonry shall be placed on slopes of embankments or channels. When embankments are constructed of such material, this material shall be placed in accordance with requirements for formation of embankments. Any broken concrete or masonry that cannot be used in construction and all other materials not considered suitable for use elsewhere, shall be disposed of by the Contractor. In no case, shall any discarded materials be left in windrows or piles adjacent to or within the airport limits. The manner and location of disposal of materials shall be subject to the approval of the RPR and shall not create an unsightly or objectionable view. When the Contractor is required to locate a disposal area outside the airport property limits, the Contractor shall obtain and file with the RPR permission in writing from the property owner for the use of private property for this purpose.

151-2.1.2 Blasting. Blasting shall not be allowed.

151-2.2 Clearing. The Contractor shall clear the staked or indicated area of all materials as indicated on the plans. Trees unavoidably falling outside the specified clearing limits must be cut up, removed, and disposed of in a satisfactory manner. To minimize damage to trees that are to be left standing, trees shall be felled toward the center of the area being cleared. The Contractor shall preserve and protect from injury all trees not to be removed. The trees, stumps, and brush shall be cut flush with the original ground surface. The grubbing of stumps and roots will not be required.
Fences shall be removed and disposed of as directed by the RPR. Fence wire shall be neatly rolled and the wire and posts stored on the airport if they are to be used again, or stored at a location designated by the RPR if the fence is to remain the property of a local owner or authority.

**151-2.3 Clearing and grubbing.** In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials as indicated on the plans, shall be removed, except where embankments exceeding 3-1/2 feet (105 cm) in depth will be constructed outside of paved areas. For embankments constructed outside of paved areas, all unsatisfactory materials shall be removed, but sound trees, stumps, and brush can be cut off flush with the original ground and allowed to remain. Tap roots and other projections over 1-1/2 inches (38 mm) in diameter shall be grubbed out to a depth of at least 18 inches (0.5 m) below the finished subgrade or slope elevation.

Any buildings and miscellaneous structures that are shown on the plans to be removed shall be demolished or removed, and all materials shall be disposed of by removal from the site. The cost of removal is incidental to this item. The remaining or existing foundations, wells, cesspools, and like structures shall be destroyed by breaking down the materials of which the foundations, wells, cesspools, etc., are built to a depth at least 2 feet (60 cm) below the existing surrounding ground. Any broken concrete, blocks, or other objectionable material that cannot be used in backfill shall be removed and disposed of at the Contractor’s expense. The holes or openings shall be backfilled with acceptable material and properly compacted.

All holes in embankment areas remaining after the grubbing operation shall have the sides of the holes flattened to facilitate filling with acceptable material and compacting as required in Item P-152. The same procedure shall be applied to all holes remaining after grubbing in areas where the depth of holes exceeds the depth of the proposed excavation.

**METHOD OF MEASUREMENT**

151-3.1 The quantities of clearing as shown by the limits on the plans shall be the number of acres or fractions thereof, of land specifically cleared.

**BASIS OF PAYMENT**

151-4.1 Payment shall be made at the contract unit price per acre or fractions thereof for clearing. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-151-4.1 Clearing - per acre or fractions thereof

**END OF ITEM P-151**
ITEM P-152 EXCAVATION, SUBGRADE AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed in designated waste areas as shown on the plans. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR.

CONSTRUCTION METHODS

152-2.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of in waste areas as shown on the plans. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor’s excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches, to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches in their greatest dimension will not be permitted in the top 6 inches of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor’s operations during the period of the contract.


152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of

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the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Digital terrain model (DTM) files of the existing surfaces, finished surfaces and other various surfaces were used to develop the design plans.

Existing grades on the design cross sections or DTM’s, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM’s. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot of the stated elevations for ground surfaces, or within 0.04 foot for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least two weeks before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM’s. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes as shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed of the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard for Over-Excavation. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation.
c. **Over-break.** Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as “Unclassified Excavation.”

d. **Removal of utilities.** The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

**152-2.3 Borrow excavation.** Borrow areas within the airport property are indicated on the plans. Borrow excavation shall be made only at these designated locations and within the horizontal and vertical limits as staked or as directed by the RPR. All unsuitable material shall be disposed of by the Contractor as shown on the plans. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

There are no borrow sources within the boundaries of the airport property. The Contractor shall locate and obtain borrow sources, subject to the approval of the RPR. The Contractor shall notify the RPR at least 15 days prior to beginning the excavation so necessary measurements and tests can be made by the RPR. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

**152-2.4 Drainage excavation.** Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

**152-2.5 Preparation of cut areas or areas where existing pavement has been removed.** In those areas on which a subbase or base course is to be placed, the top 12 inches of subgrade shall be compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D1557. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

**152-2.6 Preparation of embankment area.** All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

**152-2.7 Control Strip.** The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the
materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches nor more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The Contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with D 1557. A new Proctor shall be developed for each soil type based on visual classification.

If the material has greater than 30% retained on the 3/4-inch sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 95% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D1557. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 100 percent of the maximum density as determined by ASTM D1557. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches which shall be prepared for a seedbed in accordance with Item T-901.
The in-place field density shall be determined in accordance with ASTM 6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. The Contractor’s laboratory shall perform all density tests in the RPR’s presence and provide the test results upon completion to the RPR for acceptance. If the specified density is not attained, the area represented by the test or as designated by the RPR shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

Compaction areas shall be kept separate, and no lift shall be covered by another lift until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each lift is placed. Lift placement shall begin in the deepest portion of the embankment fill. As placement progresses, the lifts shall be constructed approximately parallel to the finished pavement grade line.

When rock, concrete pavement, asphalt pavement, and other embankment material are excavated at approximately the same time as the subgrade, the material shall be incorporated into the outer portion of the embankment and the subgrade material shall be incorporated under the future paved areas. Stones, fragmentary rock, and recycled pavement larger than 4 inches in their greatest dimensions will not be allowed in the top 12 inches of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall not be disposed of except at places and in the manner designated on the plans or by the RPR.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet in thickness. Each lift shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The lift shall not be constructed above an elevation 4 feet below the finished subgrade.

Payment for compacted embankment will be made under embankment in-place and no payment will be made for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 20 ton Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 80/100/150 psi in the presence of the RPR. Apply a minimum of three coverages, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch or show permanent deformation greater than 1 inch shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches and to a density of not less than 100 percent of the maximum dry density as determined by ASTM D1557. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D1557.

The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch sieve, follow the methods in ASTM D1557. Tests for moisture content and compaction will be taken at a minimum of 500 S.Y. of subgrade. All quality assurance testing shall be
done by the Contractor’s laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Density tests will be taken by the RPR for every 500 square yards of completed subgrade. If a nuclear gage is used for density determination, two random readings shall be made for each 1,000 square yards.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified. If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches, reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor’s expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch when tested with a 12-foot straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot straightedge for the full length of each line on a 50-foot grid.
b. **Grade.** The grade and crown shall be measured on a 50-foot grid and shall be within +/-0.05 feet of the specified grade.

On safety areas, turfed areas and other designated areas within the grading limits where no subbase or base is to be placed, grade shall not vary more than 0.10 feet from specified grade. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

152.2.14 **Topsoil.** When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905. If, at the time of excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. Stockpiles shall be located as shown on the plans and the approved CSPP, and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the RPR, it is practical to place the salvaged topsoil at the time of excavation or stripping, the material shall be placed in its final position without stockpiling or further re-handling.

Upon completion of grading operations, stockpiled topsoil shall be handled and placed as shown on the plans and as required in Item T-905. Topsoil shall be paid for as provided in Item T-905. No direct payment will be made for topsoil under Item P-152.

**METHOD OF MEASUREMENT**

152.3.1 The quantity of unclassified excavation to be paid for shall be the number of cubic yards measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

152.3.2 The quantity of over-excavation to be paid for shall be the number of cubic yards measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

152.3.3 The quantity for embankment will not be measured separately for payment. Embankment required for construction is incidental to unclassified excavation.

**BASIS OF PAYMENT**

152.4.1 Unclassified excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item. No separate payment will be made for embankment. Embankment required for construction is incidental to unclassified excavation.

Payment will be made under:

- **Item P-152-4.1** Unclassified Excavation - per cubic yard
- **Item P-152-4.2** Over-Excavation - per cubic yard
REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)
AASHTO T-180 Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)
ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft$^3$ (600 kN-m/m$^3$))
ASTM D1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft$^3$ (2700 kN-m/m$^3$))
ASTM D6938 Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)
AC 150/5370-2 Operational Safety on Airports During Construction Software

U.S. Department of Transportation
FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design
FAA RD-76-66 Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152
Item P-153 Controlled Low-Strength Material (CLSM)

DESCRIPTION

153-1.1 This item shall consist of furnishing, transporting, and placing a controlled low-strength material (CLSM) as flowable backfill in trenches or at other locations shown on the plans or as directed by the Resident Project Representative (RPR).

MATERIALS

153-2.1 Materials.
   a. Cement. Cement shall conform to the requirements of ASTM C150, Type I, II.
   b. Fly ash. Fly ash shall conform to ASTM C618, Class C or F.
   c. Fine aggregate (sand). Fine aggregate shall conform to the requirements of ASTM C33 except for aggregate gradation. Any aggregate gradation which produces the specified performance characteristics of the CLSM and meets the following requirements, will be accepted.

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</tbody>
</table>

d. Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

MIX DESIGN

153-3.1 Proportions. The Contractor shall submit, to the RPR, a mix design including the proportions and source of aggregate, fly ash, cement, water, and approved admixtures. No CLSM mixture shall be produced for payment until the RPR has given written approval of the proportions. The proportions shall be prepared by a laboratory and shall remain in effect for the duration of the project. The proportions shall establish a single percentage or weight for aggregate, fly ash, cement, water, and any admixtures proposed. Laboratory costs are incidental to this item.
   a. Compressive strength. CLSM shall be designed to achieve a 28-day compressive strength of 100 to 200 psi (690 to 1379 kPa) when tested in accordance with ASTM D4832, with no significant strength gain after 28 days.
   b. Consistency. Design CLSM to achieve a consistency that will produce an approximate 8-inch (200 mm) diameter circular-type spread without segregation. CLSM consistency shall be determined per ASTM D6103.

CONSTRUCTION METHODS

153-4.1 Placement.
   a. Placement. CLSM may be placed by any reasonable means from the mixing unit into the space to be filled. Agitation is required during transportation and waiting time. Placement shall be performed so structures or pipes are not displaced from their final position and intrusion of CLSM into unwanted areas is avoided. The material shall be brought up uniformly to the fill line shown on the plans or as directed by the RPR. Each placement of CLSM shall be as continuous an operation as possible. If CLSM is placed in
more than one lift, the base lift shall be free of surface water and loose foreign material prior to placement of the next lift.

b. Contractor Quality Control. The Contractor shall collect all batch tickets to verify the CLSM delivered to the project conforms to the mix design. The Contractor shall verify daily that the CLSM is consistent with 153-3.1a and 153-3.1b. Adjustments shall be made as necessary to the proportions and materials as needed. The Contractor shall provide all batch tickets to the RPR.

c. Limitations of placement. CLSM shall not be placed on frozen ground. Mixing and placing may begin when the air or ground temperature is at least 35°F (2°C) and rising. Mixing and placement shall stop when the air temperature is 40°F (4°C) and falling or when the anticipated air or ground temperature will be 35°F (2°C) or less in the 24-hour period following proposed placement. At the time of placement, CLSM shall have a temperature of at least 40°F (4°C).

153-4.2 Curing and protection

a. Curing. The air in contact with the CLSM shall be maintained at temperatures above freezing for a minimum of 72 hours. If the CLSM is subjected to temperatures below 32°F (0°C), the material may be rejected by the RPR if damage to the material is observed.

b. Protection. The CLSM shall not be subject to loads and shall remain undisturbed by construction activities for a period of 48 hours or until a compressive strength of 15 psi (105 kPa) is obtained. The Contractor shall be responsible for providing evidence to the RPR that the material has reached the desired strength. Acceptable evidence shall be based upon compressive tests made in accordance with paragraph 153-3.1a.

153-4.3 Quality Assurance (QA) Acceptance. CLSM QA acceptance shall be based upon batch tickets provided by the Contractor to the RPR to confirm that the delivered material conforms to the mix design.

METHOD OF MEASUREMENT

153-5.1 Measurement.

No separate measurement for payment shall be made for controlled low strength material (CLSM). CLSM shall be considered necessary and incidental to the work of this Contract.

BASIS OF PAYMENT

153-6.1 Payment.

No payment will be made separately or directly for controlled low strength material (CLSM). CLSM shall be considered necessary and incidental to the work of this Contract.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

<table>
<thead>
<tr>
<th>Standard Specification</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Aggregates</td>
<td>ASTM C33</td>
</tr>
<tr>
<td>Portland Cement</td>
<td>ASTM C150</td>
</tr>
<tr>
<td>Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete</td>
<td>ASTM C618</td>
</tr>
<tr>
<td>Blended Hydraulic Cements</td>
<td>ASTM C595</td>
</tr>
</tbody>
</table>
ASTM C1602 Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D4832 Standard Test Method for Preparation and Testing of Controlled Low-Strength Material (CLSM) Test Cylinders
ASTM D6103 Flow Consistency of Controlled Low Strength Material (CLSM)

END OF ITEM P-153
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Item P-154 Subbase Course

DESCRIPTION

154-1.1 This item shall consist of a subbase course composed of granular materials constructed on a prepared subgrade or underlying course in accordance with these specifications, and in conformity with the dimensions and typical cross-section shown on the plans.

MATERIALS

154-2.1 Materials. The subbase material shall consist of hard durable particles or fragments of granular aggregates. The material may be obtained from gravel pits, stockpiles, or may be produced from a crushing and screening plant with proper blending. The materials from these sources shall meet the requirements for gradation, quality, and consistency. The material shall be free from vegetative matter, excessive amounts of clay, and other objectionable substances; uniformly blended; and be capable of being compacted into a dense, stable subbase.

The subbase material shall exhibit a California Bearing Ratio (CBR) value of at least 20 when tested in accordance with ASTM D1883. The subbase material shall meet the gradation specified in the table below.

SUBBASE GRADATION REQUIREMENTS

<table>
<thead>
<tr>
<th>Sieve designation</th>
<th>Percentage by weight passing sieves</th>
<th>Contractor's Final Gradation</th>
<th>Job Control Grading Band Tolerances</th>
<th>(Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subbase Aggregate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 inch</td>
<td>100</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/4 inch</td>
<td>70-100</td>
<td>±10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 10</td>
<td>20-100</td>
<td>±10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 40</td>
<td>5-60</td>
<td>±5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 200</td>
<td>0-10</td>
<td>±5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The “Job Control Grading Band Tolerances” shall be applied to “Contractor’s Final Gradation” to establish the job control grading band.

The portion of the material passing the No. 40 sieve shall have a liquid limit of not more than 25 and a plasticity index of not more than six (6) when tested in accordance with ASTM D4318.

154-2.2 Sampling and testing.

a. Aggregate base materials. Samples shall be taken by the Contractor per ASTM D75 for initial aggregate subbase requirements and gradation. Material shall meet the requirements in paragraphs 154-
2.1. The Contractor shall submit to the Resident Project Representative (RPR) certified test results showing that the aggregate meets the Material requirements of this section. Tests shall be representative of the material to be used for the project.

   b. Gradation requirements. The Contractor shall take at least one aggregate subbase sample per day in the presence of the RPR to check the final gradation. Samples shall be taken from the in-place, uncompacted material at sampling locations determined by the RPR on a random basis per ASTM D3665. Sampling shall be per ASTM D75 and tested per ASTM C136 and ASTM C117. Results shall be furnished to the RPR by the Contractor each day during construction. Material shall meet the requirements in paragraph 154-2.1.

154-2.3 Separation Geotextile. Separation geotextile shall be Class 2; 0.02 sec⁻¹ permittivity per ASTM D4491; Apparent opening size per ASTM D4751 with 0.60 mm maximum average roll value.

154-2.4 Geogrid. Not used.

CONSTRUCTION METHODS

154-3.1 General. The subbase course shall be placed where designated on the plans or as directed by the RPR. The material shall be shaped and thoroughly compacted within the tolerances specified. Granular subbases which, due to grain sizes or shapes, are not sufficiently stable to support the construction equipment without movement, shall be mechanically modified to the depth necessary to provide stability as directed by the RPR. The mechanical modification shall include the addition of a fine-grained medium to bind the particles of the subbase material sufficiently to furnish a bearing strength, so the course will not deform under construction equipment traffic.

154-3.2 Preparing underlying course. Prior to constructing the subbase course, clean the underlying course or subgrade of all foreign substances. The surface of the underlying course or subgrade shall meet specified compaction and surface tolerances in accordance with Item P-152. Correct ruts, soft yielding spots in the underlying courses, and subgrade areas having inadequate compaction and/or deviations of the surface from the specified requirements, by loosening and removing soft or unsatisfactory material, adding approved material, reshaping to line and grade, and recompacting to specified density requirements. For cohesionless underlying courses or subgrades containing sands or gravels, as defined in ASTM D2487, the surface shall be stabilized prior to placement of the overlying course by mixing the overlying course material into the underlying course, and compacting by approved methods. The stabilized material shall be considered as part of the underlying course and shall meet all requirements for the underlying course. The finished underlying course shall not be disturbed by traffic or other operations and shall be maintained in a satisfactory condition until the overlying course is placed. The underlying course shall be checked and accepted by the RPR before placing and spreading operations are started.

To protect the subgrade and to ensure proper drainage, spreading of the subbase shall begin along the centerline of the pavement on a crowned section or on the high side of pavements with a one-way slope.

154-3.3 Control Strip. The first half-day of subbase construction shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches upon the Contractor’s demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor’s expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods referenced in the specification.
for the remainder of construction, unless adjustments made by the Contractor are approved in advance by
the RPR.

154-3.4 Placement. The material shall be placed and spread on the prepared underlying layer by spreader
boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall
have positive thickness controls to minimize the need for additional manipulation of the material. Dumping
from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course
shall not be permitted. The material shall not be placed when the underlying course is soft or yielding.

The material shall meet gradation and moisture requirements prior to compaction. Material may be free-
draining and the minimum moisture content shall be established for placement and compaction of the
material.

The material shall be constructed in lifts as established in the control strip, but not less than 4 inches nor
more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction
procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests
verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest
any material placed which does not meet the specifications.

154-3.5 Compaction. The subbase material shall be compacted, adjusting moisture as necessary, to be
within ±2% of optimum moisture. The field density of the compacted material shall be at least 100% of the
maximum density as specified in paragraph 154-3.9a. If the specified density is not attained, the area of
the lift represented by the test shall be reworked and/or re-compacted and additional random tests made.
This procedure shall be followed until the specified density is reached. Maximum density refers to maximum
dry density at optimum moisture content unless otherwise specified.

154-3.6 Weather limitation. Material shall not be placed unless the ambient air temperature is at least
40°F and rising. Work on subbase course shall not be conducted when the subgrade is wet or frozen or the
subbase material contains frozen material.

154-3.7 Maintenance. No base or surface course shall be placed on the subbase until the subbase has
been accepted by the RPR. The Contractor shall maintain the completed course in satisfactory condition
throughout placement of subsequent layers. When material has been exposed to excessive rain, snow, or
freeze-thaw conditions, the Contractor shall verify that materials still meet all specification requirements
before placement of additional material. Equipment may be routed over completed sections of subbase
course, provided the equipment does not damage the subbase course and the equipment is routed over
the full width of the completed subbase course. Any damage to the subbase course from routing equipment
over the subbase course shall be repaired by the Contractor at their expense.

154-3.8 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface
shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required
smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches,
reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and
approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence
of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor’s
expense.

   a. Smoothness. The finished surface shall not vary more than +/- ½ inch when tested with a 12-foot
   straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved
   continuously forward at half the length of the 12-foot straightedge for the full length of each line on a 50-
   foot grid.
b. Grade. The grade and crown shall be measured on a 50-foot grid and shall be within +/-0.05 feet of the specified grade.

154-3.9 Acceptance sampling and testing. The aggregate base course shall be accepted for density and thickness on an area basis. Two tests shall be made for density and thickness for each 1,000 square yards. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. The Contractor’s laboratory shall perform all density tests in the RPR’s presence and provide the test results upon completion to the RPR for acceptance.

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D1557. The in-place field density shall be determined per ASTM D1556. If the specified density is not attained, the area represented by the failed test shall be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

When the material has greater than 30 percent retained on the ¾ inch sieve, use methods in ASTM D1557 and the procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles.

b. Thickness. The thickness of the base course shall be within +0 and -1/2 inch of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch, the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches, adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

METHOD OF MEASUREMENT

154-4.1 Subbase course shall be measured by the number of cubic yards of subbase course material placed and compacted to specified density and plan thickness requirements in the completed course. The quantity of subbase course material shall be measured in final position based upon survey of the completed work computed from elevations to the nearest 0.01 foot. On individual depth measurements, thicknesses more than 1/2 inch in excess of that shown on the plans shall be considered as the specified thickness plus 1/2 inch in computing the yardage for payment. Subbase materials shall not be included in any other excavation quantities.

154-4.2 Separation geotextile shall be measured by the number of square yards of materials placed and accepted by the RPR as complying with the plans and specifications excluding seam overlaps and edge anchoring.

BASIS OF PAYMENT

154-5.1 Payment shall be made at the contract unit price per cubic yard for subbase course. This price shall be full compensation for furnishing all materials; for all preparation, hauling, and placing of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

154-5.2 Payment shall be made at the contract unit price per square yard for separation geotextile-class 2. The price shall be full compensation for furnishing all labor, equipment, material, anchors, and necessary incidentals.
154-5.3 Payment shall be made at the contract unit price per cubic yard for bituminous millings placement. This price shall be full compensation for furnishing all materials; for all preparation, hauling, and placing of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:
- Item P-154-5.1 Subbase Course - per cubic yard
- Item P-154-5.2 Separation Fabric - per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)
- ASTM D75 Standard Practice for Sampling Aggregates
- ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³))
- ASTM D1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
- ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))
- ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTM D4253 Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
- ASTM D4759 Practice for Determining the Specification Conformance of Geosynthetics
- ASTM D6938 Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

American Association of State Highway and Transportation Officials (AASHTO)
- M 288 Geotextile Specification for Highway Applications

END OF ITEM P-154
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Item P-209 Crushed Aggregate Base Course

DESCRIPTION

209-1.1 This item consists of a base course composed of crushed aggregate base constructed on a prepared course in accordance with these specifications and in conformity to the dimensions and typical cross-sections shown on the plans.

MATERIALS

209-2.1 Crushed aggregate base. Crushed aggregate shall consist of clean, sound, durable particles of crushed stone, crushed gravel, and shall be free from coatings of clay, silt, organic material, clay lumps or balls or other deleterious materials or coatings. The method used to produce the crushed gravel shall result in the fractured particles in the finished product as consistent and uniform as practicable. Fine aggregate portion, defined as the portion passing the No. 4 sieve shall consist of fines from the coarse aggregate crushing operation. The fine aggregate shall be produced by crushing stone, gravel, that meet the coarse aggregate requirements for wear and soundness. Aggregate base material requirements are listed in the following table.

CRUSHED AGGREGATE BASE MATERIAL REQUIREMENTS

<table>
<thead>
<tr>
<th>Material Test</th>
<th>Requirement</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coarse Aggregate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance to Degradation</td>
<td>Loss: 45% maximum</td>
<td>ASTM C131</td>
</tr>
<tr>
<td>Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate</td>
<td>Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate</td>
<td>ASTM C88</td>
</tr>
<tr>
<td>Percentage of Fractured Particles</td>
<td>Minimum 90% by weight of particles with at least two fractured faces and 100% with at least one fractured face¹</td>
<td>ASTM D5821</td>
</tr>
<tr>
<td>Flat Particles, Elongated Particles, or Flat and Elongated Particles</td>
<td>10% maximum, by weight, of flat, elongated, or flat and elongated particles ²</td>
<td>ASTM D4791</td>
</tr>
<tr>
<td>Clay lumps and friable particles</td>
<td>Less than or equal to 3 percent</td>
<td>ASTM C142</td>
</tr>
<tr>
<td><strong>Fine Aggregate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid limit</td>
<td>Less than or equal to 25</td>
<td>ASTM D4318</td>
</tr>
<tr>
<td>Plasticity Index</td>
<td>Not more than five (5)</td>
<td>ASTM D4318</td>
</tr>
</tbody>
</table>

¹ The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

² A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

209-2.2 Gradation requirements. The gradation of the aggregate base material shall meet the requirements of the gradation given in the following table when tested per ASTM C117 and ASTM C136. The gradation shall be well graded from coarse to fine and shall not vary from the lower limit on one sieve to the high limit on an adjacent sieve or vice versa.
### GRADATION OF AGGREGATE BASE

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Design Range Percentage by Weight passing</th>
<th>Contractor’s Final Gradation</th>
<th>Job Control Grading Band Tolerances¹ (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 inch</td>
<td>100</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>1-1/2 inch</td>
<td>95-100</td>
<td></td>
<td>±5</td>
</tr>
<tr>
<td>1 inch</td>
<td>70-95</td>
<td></td>
<td>±8</td>
</tr>
<tr>
<td>3/4 inch</td>
<td>55-85</td>
<td></td>
<td>±8</td>
</tr>
<tr>
<td>No. 4</td>
<td>30-60</td>
<td></td>
<td>±8</td>
</tr>
<tr>
<td>No. 40²</td>
<td>10-30</td>
<td></td>
<td>±5</td>
</tr>
<tr>
<td>No. 200²</td>
<td>0-10</td>
<td></td>
<td>±3</td>
</tr>
</tbody>
</table>

¹ The “Job Control Grading Band Tolerances for Contractor’s Final Gradation” in the table shall be applied to “Contractor’s Final Gradation” to establish a job control grading band. The full tolerance still applies if application of the tolerances results in a job control grading band outside the design range.

² The fraction of material passing the No 200 sieve shall not exceed two-thirds the fraction passing the No 40 sieve.

### 209-2 Sampling and Testing.

a. **Aggregate base materials.** The Contractor shall take samples of the aggregate base in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraph 209-2.1. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

b. **Gradation requirements.** The Contractor shall take at least two aggregate base samples per day in the presence of the Resident Project Representative (RPR) to check the final gradation. Sampling shall be per ASTM D75. Material shall meet the requirements in paragraph 209-2.2. The samples shall be taken from the in-place, un-compacted material at sampling points and intervals designated by the RPR.

### 209-2.4 Separation Geotextile. Not used.

### CONSTRUCTION METHODS

#### 209-3.1 Control strip.

The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches upon the Contractor’s demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted or removed and replaced at the Contractor’s expense. Full operations shall not continue until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved by the RPR.

#### 209-3.2 Preparing underlying subgrade and/or subbase.

The underlying subgrade and/or subbase shall be checked and accepted by the RPR before base course placing and spreading operations begin. Re-proof rolling of the subgrade or proof rolling of the subbase in accordance with Item P-152, at the Contractor’s expense, may be required by the RPR if the Contractor fails to ensure proper drainage or protect the subgrade and/or subbase. Any ruts or soft, yielding areas due to improper drainage conditions, hauling, or any other cause, shall be corrected before the base course is placed. To ensure proper drainage, the spreading of the base shall begin along the centerline of the pavement on a crowned section or on the high side of the pavement with a one-way slope.
209-3.3 Production. The aggregate shall be uniformly blended and, when at a satisfactory moisture content per paragraph 209-3.5, the approved material may be transported directly to the placement.

209-3.4 Placement. The aggregate shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

The aggregate shall meet gradation and moisture requirements prior to compaction. The base course shall be constructed in lifts as established in the control strip, but not less than 4 inches nor more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications at the Contractor’s expense.

209-3.5 Compaction. Immediately after completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers may be sufficient to compact the material to the required density within the same day that the aggregate is placed on the subgrade.

The field density of each compacted lift of material shall be at least 100% of the maximum density of laboratory specimens prepared from samples of the subbase material delivered to the jobsite. The laboratory specimens shall be compacted and tested in accordance with ASTM D1557. The moisture content of the material during placing operations shall be within ±2 percentage points of the optimum moisture content as determined by ASTM D6938. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

209-3.6 Weather limitations. Material shall not be placed unless the ambient air temperature is at least 40°F and rising. Work on base course shall not be conducted when the subgrade or subbase is wet or frozen or the base material contains frozen material.

209-3.7 Maintenance. The base course shall be maintained in a condition that will meet all specification requirements. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. Equipment may be routed over completed sections of base course, provided that no damage results and the equipment is routed over the full width of the completed base course. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at the Contractor’s expense.

209-3.8 Surface tolerances. After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches, reshaped and recompacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor’s expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

   a. Smoothness. The finished surface shall not vary more than 3/8-inch when tested with a 12-foot straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot straightedge for the full length of each line on a 50-foot grid.
b. Grade. The grade and crown shall be measured on a 50-foot grid and shall be within +0 and -1/2 inch of the specified grade.

209-3.9 Acceptance sampling and testing. Crushed aggregate base course shall be accepted for density and thickness on an area basis. Two tests shall be made for density and thickness for each 1200 square yds. Sampling locations will be determined on a random basis per ASTM D3665

a. Density. The Contractor’s laboratory shall perform all density tests in the RPR’s presence and provide the test results upon completion to the RPR for acceptance.

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM 1557. The in-place field density shall be determined per ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the area represented by the failed test must be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. Depth tests shall be made by test holes at least 3 inches in diameter that extend through the base. The thickness of the base course shall be within +0 and -1/2 inch of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch, the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches, adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

METHOD OF MEASUREMENT

209-4.1 The quantity of crushed aggregate base course will be determined by measurement of the number of cubic yards of material actually constructed and accepted by the RPR as complying with the plans and specifications. Base materials shall not be included in any other excavation quantities.

BASIS OF PAYMENT

209-5.1 Payment shall be made at the contract unit price per cubic yard for crushed aggregate base course. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item.

Payement will be made under:
Item P-209-5.1 Crushed Aggregate Base Course - per cubic yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)
ASTM C29 Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C88 Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
<table>
<thead>
<tr>
<th>Standard Test Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM C117</td>
<td>Standard Test Method for Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing</td>
</tr>
<tr>
<td>ASTM C136</td>
<td>Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates</td>
</tr>
<tr>
<td>ASTM C142</td>
<td>Standard Test Method for Clay Lumps and Friable Particles in Aggregates</td>
</tr>
<tr>
<td>ASTM D75</td>
<td>Standard Practice for Sampling Aggregates</td>
</tr>
<tr>
<td>ASTM D698</td>
<td>Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³))</td>
</tr>
<tr>
<td>ASTM D1556</td>
<td>Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method</td>
</tr>
<tr>
<td>ASTM D1557</td>
<td>Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2700 kN-m/m³))</td>
</tr>
<tr>
<td>ASTM D2167</td>
<td>Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method</td>
</tr>
<tr>
<td>ASTM D3665</td>
<td>Standard Practice for Random Sampling of Construction Materials</td>
</tr>
<tr>
<td>ASTM D4491</td>
<td>Standard Test Methods for Water Permeability of Geotextiles by Permittivity</td>
</tr>
<tr>
<td>ASTM D4643</td>
<td>Standard Test Method for Determination of Water Content of Soil and Rock by Microwave Oven Heating</td>
</tr>
<tr>
<td>ASTM D4751</td>
<td>Standard Test Methods for Determining Apparent Opening Size of a Geotextile</td>
</tr>
<tr>
<td>ASTM D4791</td>
<td>Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate</td>
</tr>
<tr>
<td>ASTM D5821</td>
<td>Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate</td>
</tr>
<tr>
<td>ASTM D6938</td>
<td>Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)</td>
</tr>
<tr>
<td>ASTM D7928</td>
<td>Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis</td>
</tr>
<tr>
<td>M288</td>
<td>Standard Specification for Geosynthetic Specification for Highway Applications</td>
</tr>
</tbody>
</table>

END OF ITEM P-209
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ITEM P-401 ASPHALT MIX PAVEMENT

DESCRIPTION

401-1.1 This item shall consist of pavement courses composed of mineral aggregate and asphalt binder mixed in a central mixing plant and placed on a prepared base or stabilized course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

MATERIALS

401-2.1 Aggregate. Aggregates shall consist of crushed stone, crushed gravel, crushed slag, screenings, natural sand, and mineral filler, as required. The aggregates should have no known history of detrimental pavement staining due to ferrous sulfides, such as pyrite. Coarse aggregate is the material retained on the No. 4 sieve. Fine aggregate is the material passing the No. 4 sieve.

a. Coarse aggregate. Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. Coarse aggregate material requirements are given in the table below.

Coarse Aggregate Material Requirements

<table>
<thead>
<tr>
<th>Material Test</th>
<th>Requirement</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance to Degradation</td>
<td>Loss: 40% maximum</td>
<td>ASTM C131</td>
</tr>
<tr>
<td>Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate</td>
<td>Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate</td>
<td>ASTM C88</td>
</tr>
<tr>
<td>Clay lumps and friable particles</td>
<td>0.3% maximum</td>
<td>ASTM C142</td>
</tr>
<tr>
<td>Percentage of Fractured Particles</td>
<td>Minimum 75% by weight of particles with at least two fractured faces and 85% with at least one fractured face¹</td>
<td>ASTM D5821</td>
</tr>
<tr>
<td>Flat, Elongated, or Flat and Elongated Particles</td>
<td>8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1²</td>
<td>ASTM D4791</td>
</tr>
<tr>
<td>Bulk density of slag ³</td>
<td>Weigh not less than 70 pounds per cubic foot</td>
<td>ASTM C29</td>
</tr>
</tbody>
</table>

¹ The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

² A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

³ Only required if slag is specified.

b. Fine aggregate. Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, slag, or gravel and shall be free from coatings of clay, silt, or other objectionable matter. Natural (non-manufactured) sand may be used to obtain the gradation of the fine aggregate blend or to improve the workability of the mix. Fine aggregate material requirements are listed in the table below.
Fine Aggregate Material Requirements

<table>
<thead>
<tr>
<th>Material Test</th>
<th>Requirement</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid limit</td>
<td>25 maximum</td>
<td>ASTM D4318</td>
</tr>
<tr>
<td>Plasticity Index</td>
<td>4 maximum</td>
<td>ASTM D4318</td>
</tr>
<tr>
<td>Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate</td>
<td>Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate</td>
<td>ASTM C88</td>
</tr>
<tr>
<td>Clay lumps and friable particles</td>
<td>0.3% maximum</td>
<td>ASTM C142</td>
</tr>
<tr>
<td>Sand equivalent</td>
<td>45 minimum</td>
<td>ASTM D2419</td>
</tr>
<tr>
<td>Natural Sand</td>
<td>0% to 15% maximum by weight of total aggregate</td>
<td>ASTM D1073</td>
</tr>
</tbody>
</table>

**c. Sampling.** ASTM D75 shall be used in sampling coarse and fine aggregate.

**401-2.2 Mineral filler.** Mineral filler (baghouse fines) may be added in addition to material naturally present in the aggregate. Mineral filler shall meet the requirements of ASTM D242.

**Mineral Filler Requirements**

<table>
<thead>
<tr>
<th>Material Test</th>
<th>Requirement</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasticity Index</td>
<td>4 maximum</td>
<td>ASTM D4318</td>
</tr>
</tbody>
</table>

**401-2.3 Asphalt binder.** Asphalt binder shall conform to ASTM D6373 Performance Grade (PG) 70-28.

**401-2.4 Anti-stripping agent.** Any anti-stripping agent or additive (anti-strip) shall be heat stable and shall not change the asphalt binder grade beyond specifications. Anti-strip shall be an approved material of the Department of Transportation of the State in which the project is located.

**COMPOSITION**

**401-3.1 Composition of mixture(s).** The asphalt mix shall be composed of a mixture of aggregates, filler and anti-strip agent if required, and asphalt binder. The aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

**401-3.2 Job mix formula (JMF) laboratory.** The laboratory used to develop the JMF shall possess a current certificate of accreditation, listing D3666 from a national accrediting authority and all test methods required for developing the JMF; and be listed on the accrediting authority’s website. A copy of the laboratory’s current accreditation and accredited test methods shall be submitted to the Resident Project Representative (RPR) prior to start of construction.

**401-3.3 Job mix formula (JMF).** No asphalt mixture shall be placed until an acceptable mix design has been submitted to the RPR for review and accepted in writing. The RPR’s review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

When the project requires asphalt mixtures of differing aggregate gradations and/or binders, a separate JMF shall be submitted for each mix. Add anti-stripping agent to meet tensile strength requirements. The JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 401-3.2. The asphalt mixture shall be designed using procedures contained in Asphalt Institute MS-2 Mix.

Should a change in sources of materials be made, a new JMF must be submitted to the RPR for review and accepted in writing before the new material is used. After the initial production JMF has been approved by the RPR and a new or modified JMF is required for whatever reason, the subsequent cost of the new or modified JMF, including a new control strip when required by the RPR, will be borne by the Contractor.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications. The JMF shall be submitted in writing by the Contractor at least 30 days prior to the start of paving operations. The JMF shall be developed within the same construction season using aggregates proposed for project use.

The JMF shall be dated, and stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items as a minimum:

- Manufacturer’s Certificate of Analysis (COA) for the asphalt binder used in the JMF in accordance with paragraph 401-2.3. Certificate of asphalt performance grade is with modifier already added, if used and must indicate compliance with ASTM D6373. For plant modified asphalt binder, certified test report indicating grade certification of modified asphalt binder.
- Manufacturer’s Certificate of Analysis (COA) for the anti-stripping agent if used in the JMF in accordance with paragraph 401-2.4.
- Certified material test reports for the course and fine aggregate and mineral filler in accordance with paragraphs 401-2.1.
- Percent passing each sieve size for individual gradation of each aggregate cold feed and/or hot bin; percent by weight of each cold feed and/or hot bin used; and the total combined gradation in the JMF.
- Specific Gravity and absorption of each coarse and fine aggregate.
- Percent natural sand.
- Percent fractured faces.
- Percent by weight of flat particles, elongated particles, and flat and elongated particles (and criteria).
- Percent of asphalt.
- Number of blows or gyrations
- Laboratory mixing and compaction temperatures.
- Supplier-recommended field mixing and compaction temperatures.
- Plot of the combined gradation on a 0.45 power gradation curve.
- Graphical plots of air voids, voids in the mineral aggregate (VMA), and unit weight versus asphalt content. To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.
- Tensile Strength Ratio (TSR).
- Type and amount of Anti-strip agent when used.
- Asphalt Pavement Analyzer (APA) results.
Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted.

Percentage and properties (asphalt content, asphalt binder properties, and aggregate properties) of reclaimed asphalt mix pavement (RAP) in accordance with paragraph 401-3.4. Table 1. Asphalt Design Criteria

<table>
<thead>
<tr>
<th>Test Property</th>
<th>Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of blows or gyrations</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Air voids (%)</td>
<td>3.5</td>
<td>ASTM D3203</td>
</tr>
<tr>
<td>Percent voids in mineral aggregate (VMA), minimum</td>
<td>See Table 2</td>
<td>ASTM D6995</td>
</tr>
<tr>
<td>Tensile Strength Ratio (TSR)(^1)</td>
<td>not less than 80 at a saturation of 70-80%</td>
<td>ASTM D4867</td>
</tr>
<tr>
<td>Asphalt Pavement Analyzer (APA)(^2)</td>
<td>Less than 10 mm @ 4000 passes</td>
<td>AASHTO T340 at 250 psi hose pressure at 64°C test temperature</td>
</tr>
</tbody>
</table>

\(^1\) Test specimens for TSR shall be compacted at 7 ± 1.0 % air voids. In areas subject to freeze-thaw, use freeze-thaw conditioning in lieu of moisture conditioning per ASTM D4867.

\(^2\) AASHTO T340 at 100 psi hose pressure at 64°C test temperature may be used in the interim. If this method is used the required Value shall be less than 5 mm @ 8000 passes.

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 2 when tested in accordance with ASTM C136 and ASTM C117.

The gradations in Table 2 represent the limits that shall determine the suitability of aggregate for use from the sources of supply; be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa. The use or APA or Hamburg is not required for pavements serving aircraft less than 60,000 pounds.

Table 2. Aggregate - Asphalt Pavements

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percentage by Weight Passing Sieve</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 inch (25.0 mm)</td>
<td>--</td>
</tr>
<tr>
<td>3/4 inch (19.0 mm)</td>
<td>100</td>
</tr>
<tr>
<td>1/2 inch (12.5 mm)</td>
<td>90-100</td>
</tr>
<tr>
<td>3/8 inch (9.5 mm)</td>
<td>72-88</td>
</tr>
<tr>
<td>No. 4 (4.75 mm)</td>
<td>53-73</td>
</tr>
<tr>
<td>No. 8 (2.36 mm)</td>
<td>38-60</td>
</tr>
<tr>
<td>No. 16 (1.18 mm)</td>
<td>26-48</td>
</tr>
<tr>
<td>No. 30 (600 µm)</td>
<td>18-38</td>
</tr>
<tr>
<td>No. 50 (300 µm)</td>
<td>11-27</td>
</tr>
<tr>
<td>No. 100 (150 µm)</td>
<td>6-18</td>
</tr>
<tr>
<td>No. 200 (75 µm)</td>
<td>3-6</td>
</tr>
</tbody>
</table>

Minimum Voids in Mineral Aggregate (VMA)\(^1\) 15.0
### Sieve Size

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percentage by Weight Passing Sieve</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asphalt Percent:</strong></td>
<td></td>
</tr>
<tr>
<td>Stone or gravel</td>
<td>5.0-7.5</td>
</tr>
<tr>
<td>Slag</td>
<td>6.5-9.5</td>
</tr>
<tr>
<td><strong>Recommended Minimum Construction Lift Thickness</strong></td>
<td>2 inch</td>
</tr>
</tbody>
</table>

To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.

The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

#### 401-3.4 Reclaimed asphalt pavement (RAP)

RAP shall not be used.

#### 401-3.5 Control Strip

Full production shall not begin until an acceptable control strip has been constructed and accepted in writing by the RPR. The Contractor shall prepare and place a quantity of asphalt according to the JMF. The underlying grade or pavement structure upon which the control strip is to be constructed shall be the same as the remainder of the course represented by the control strip.

The Contractor will not be allowed to place the control strip until the Contractor quality control program (CQCP), showing conformance with the requirements of paragraph 401-5.1, has been accepted, in writing, by the RPR.

The control strip will consist of at least 250 tons or 1/2 sublot, whichever is greater. The control strip shall be placed in two lanes of the same width and depth to be used in production with a longitudinal cold joint. The cold joint must be cut back in accordance with paragraph 401-4.14 using the same procedure that will be used during production. The cold joint for the control strip will be an exposed construction joint at least four (4) hours old or when the mat has cooled to less than 160°F. The equipment used in construction of the control strip shall be the same type, configuration and weight to be used on the project.

The control strip will be considered acceptable by the RPR if the gradation, asphalt content, and VMA are within the action limits specified in paragraph 401-5.5a; and Mat density greater than or equal to 94.5%, air voids 3.5% +/-1%, and joint density greater than or equal to 92.5%.

The control strip will be considered on lot for payment based upon the average of a minimum of 3 samples (no sublots required for control strip). If the control strip is unacceptable, necessary adjustments to the JMF, plant operation, placing procedures, and/or rolling procedures shall be made and another control strip shall be placed. Unacceptable control strips shall be removed at the Contractor’s expense.

Payment will only be made for an acceptable control strip in accordance with paragraph 401-8.1 using a lot pay factor equal to 100.
CONSTRUCTION METHODS

401-4.1 Weather limitations. The asphalt shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 4. The temperature requirements may be waived by the RPR, if requested; however, all other requirements including compaction shall be met.

Table 4. Surface Temperature Limitations of Underlying Course

<table>
<thead>
<tr>
<th>Mat Thickness</th>
<th>Base Temperature (Minimum) °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 inches or greater</td>
<td>40</td>
</tr>
<tr>
<td>Greater than 2 inches but less than 3 inches</td>
<td>45</td>
</tr>
</tbody>
</table>

401-4.2 Asphalt plant. Plants used for the preparation of asphalt shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 including the following items.

a. Inspection of plant. The RPR, or RPR's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant; verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.

b. Storage bins and surge bins. The asphalt mixture stored in storage and/or surge bins shall meet the same requirements as asphalt mixture loaded directly into trucks. Asphalt mixture shall not be stored in storage and/or surge bins for a period greater than twelve (12) hours. If the RPR determines there is an excessive heat loss, segregation, or oxidation of the asphalt mixture due to temporary storage, temporary storage shall not be allowed.

401-4.3 Aggregate stockpile management. Aggregate stockpiles shall be constructed in a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the asphalt batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used.

A continuous supply of materials shall be provided to the work to ensure continuous placement.

401-4.4 Hauling equipment. Trucks used for hauling asphalt shall have tight, clean, and smooth metal beds. To prevent the asphalt from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the RPR. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

401-4.4.1 Material transfer vehicle (MTV). Material transfer vehicles used to transfer the material from the hauling equipment to the paver, shall use a self-propelled, material transfer vehicle with a swing conveyor that can deliver material to the paver without making contact with the paver. The MTV shall be able to move back and forth between the hauling equipment and the paver providing material transfer to the paver, while allowing the paver to operate at a constant speed. The Material Transfer Vehicle will have remixing and storage capability to prevent physical and thermal segregation.
401-4.5 **Asphalt pavers.** Asphalt pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of asphalt that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface. The asphalt paver shall be equipped with a control system capable of automatically maintaining the specified screed grade and elevation.

If the spreading and finishing equipment in use leaves tracks or indented areas, or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued.

The paver shall be capable of paving to a minimum width specified in paragraph 401-4.12.

401-4.6 **Rollers.** The number, type, and weight of rollers shall be sufficient to compact the asphalt to the required density while it is still in a workable condition without crushing of the aggregate, depressions or other damage to the pavement surface. Rollers shall be in good condition, clean, and capable of operating at slow speeds to avoid displacement of the asphalt. All rollers shall be specifically designed and suitable for compacting asphalt concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used.

401-4.7 **Density device.** The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production paving. The Contractor shall supply a qualified technician during all paving operations to calibrate the gauge and obtain accurate density readings for all new asphalt. These densities shall be supplied to the RPR upon request at any time during construction. No separate payment will be made for supplying the density gauge and technician.

401-4.8 **Preparation of asphalt binder.** The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the asphalt binder to the mixer at a uniform temperature. The temperature of unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F when added to the aggregate. The temperature of modified asphalt binder shall be no more than 350°F when added to the aggregate.

401-4.9 **Preparation of mineral aggregate.** The aggregate for the asphalt shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F when the asphalt binder is added. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

401-4.10 **Preparation of Asphalt mixture.** The aggregates and the asphalt binder shall be weighed or metered and mixed in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of all asphalt upon discharge shall not exceed 0.5%.

401-4.11 **Application of Prime and Tack Coat.** Immediately before placing the asphalt mixture, the underlying course shall be cleaned of all dust and debris.
A prime coat in accordance with Item P-602 shall be applied to aggregate base prior to placing the asphalt mixture.

A tack coat shall be applied in accordance with Item P-603 to all vertical and horizontal asphalt and concrete surfaces prior to placement of the first and each subsequent lift of asphalt mixture.

401-4.12 Laydown plan, transporting, placing, and finishing. Prior to the placement of the asphalt, the Contractor shall prepare a laydown plan with the sequence of paving lanes and width to minimize the number of cold joints; the location of any temporary ramps; laydown temperature; and estimated time of completion for each portion of the work (milling, paving, rolling, cooling, etc.). The laydown plan and any modifications shall be approved by the RPR.

Deliveries shall be scheduled so that placing and compacting of asphalt is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to approximately ambient temperature. The Contractor, at their expense, shall be responsible for repair of any damage to the pavement caused by hauling operations.

Contractor shall survey each lift of asphalt surface course and certify to RPR that every lot of each lift meets the grade tolerances of paragraph 401-6.2d before the next lift can be placed.

Edges of existing asphalt pavement abutting the new work shall be saw cut and the cut off material and laitance removed. Apply a tack coat in accordance with P-603 before new asphalt material is placed against it.

The speed of the paver shall be regulated to eliminate pulling and tearing of the asphalt mat. Placement of the asphalt mix shall begin along the centerline of a crowned section or on the high side of areas with a one way slope unless shown otherwise on the laydown plan as accepted by the RPR. The asphalt mix shall be placed in consecutive adjacent lanes having a minimum width of 25 feet except where edge lanes require less width to complete the area. Additional screed sections attached to widen the paver to meet the minimum lane width requirements must include additional auger sections to move the asphalt mixture uniformly along the screed extension.

The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least one foot (30 cm); however, the joint in the surface top course shall be at the centerline of crowned pavements. Transverse joints in one course shall be offset by at least 10 feet from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet. On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the asphalt may be spread and luted by hand tools.

The RPR may at any time, reject any batch of asphalt, on the truck or placed in the mat, which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or overheated asphalt mixture. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

Areas of segregation in the surface course, as determined by the RPR, shall be removed and replaced at the Contractor’s expense. The area shall be removed by saw cutting and milling a minimum of the construction lift thickness as specified in paragraph 401-3.3, Table 2 for the approved mix design. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet long.

401-4.13 Compaction of asphalt mixture. After placing, the asphalt mixture shall be thoroughly and uniformly compacted by self-propelled rollers. The surface shall be compacted as soon as possible when the asphalt has attained sufficient stability so that the rolling does not cause undue displacement,
cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any surface defects and/or displacement occurring as a result of the roller, or from any other cause, shall be corrected at the Contractor’s expense. Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the asphalt to the roller, the wheels shall be equipped with a scraper and kept moistened with water as necessary.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power tampers.

Any asphalt that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor’s expense. Skin patching shall not be allowed.

401-4.14 Joints. The formation of all joints shall be made to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

The roller shall not pass over the unprotected end of the freshly laid asphalt except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods, all contact surfaces shall be coated with an asphalt tack coat before placing any fresh asphalt against the joint. Longitudinal joints which have been left exposed for more than four (4) hours; the surface temperature has cooled to less than 175°F; or are irregular, damaged, uncompacted or otherwise defective shall be cut back with a cutting wheel or pavement saw a maximum of 3 inches to expose a clean, sound, uniform vertical surface for the full depth of the course. All cutback material and any laitance produced from cutting joints shall be removed from the project. Asphalt tack coat in accordance with P-603 shall be applied to the clean, dry joint prior to placing any additional fresh asphalt against the joint. The cost of this work shall be considered incidental to the cost of the asphalt.

401-4.15 Saw-cut grooving. Saw-cut grooving is not required.

401-4.16 Diamond grinding. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive. Diamond grinding shall be performed with a machine designed specifically for diamond grinding capable of cutting a path at least 3 feet wide. The saw blades shall be 1/8-inch wide with a sufficient number of blades to create grooves between 0.090 and 0.130 inches wide; and peaks and ridges approximately 1/32 inch higher than the bottom of the grinding cut. The actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Equipment or grinding procedures that cause ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces. Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. The Contractor shall apply a surface treatment per P-608 to all areas that have been subject to grinding.

401-4.17 Nighttime paving requirements. The Contractor shall provide adequate lighting during any nighttime construction. A lighting plan shall be submitted by the Contractor and approved by the RPR prior to the start of any nighttime work. All work shall be in accordance with the approved CSPP and lighting plan.
CONTRACTOR QUALITY CONTROL

401-5.1 General. The Contractor shall develop a Contractor Quality Control Program (CQCP) in accordance with Item C-100. No partial payment will be made for materials without an approved CQCP.

401-5.2 Contractor quality control (QC) facilities. The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor’s QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

401-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to these specifications and as set forth in the approved CQCP. The testing program shall include, but not necessarily be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, field compaction, and surface smoothness. A QC Testing Plan shall be developed as part of the CQCP.

a. Asphalt content. A minimum of two tests shall be performed per day in accordance with ASTM D6307 or ASTM D2172 for determination of asphalt content. When using ASTM D6307, the correction factor shall be determined as part of the first test performed at the beginning of plant production; and as part of every tenth test performed thereafter. The asphalt content for the day will be determined by averaging the test results.

b. Gradation. Aggregate gradations shall be determined a minimum of twice per day from mechanical analysis of extracted aggregate in accordance with ASTM D5444, ASTM C136, and ASTM C117.

c. Moisture content of aggregate. The moisture content of aggregate used for production shall be determined a minimum of once per day in accordance with ASTM C566.

d. Moisture content of asphalt. The moisture content shall be determined once per day in accordance with AASHTO T329 or ASTM D1461.

e. Temperatures. Temperatures shall be checked, at least four times per day, at necessary locations to determine the temperatures of the dryer, the asphalt binder in the storage tank, the asphalt at the plant, and the asphalt at the job site.

f. In-place density monitoring. The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density in accordance with ASTM D2950.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues.

The Contractor may use a 12-foot straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling
inclinometer or external reference device is used, the data may be evaluated using the FAA profile program, ProFAA, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

**1) Transverse measurements.** Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

**2) Longitudinal measurements.** Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet; and at the third points of paving lanes when widths of paving lanes are 20 ft or greater.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 401-6.1d(3). Areas that have been ground shall be sealed with a surface treatment in accordance with Item P-608. To avoid the surface treatment creating any conflict with runway or taxiway markings, it may be necessary to seal a larger area.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

**h. Grade.** Grade shall be evaluated daily to allow adjustments to paving operations when grade measurements do not meet specifications. As a minimum, grade shall be evaluated prior to and after the placement of the first lift and after placement of the surface lift.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically. The documentation will be provided by the Contractor to the RPR within 24 hours.

Areas with humps or depressions that exceed grade or smoothness criteria and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch less than the thickness specified on the plans. Grinding shall be in accordance with paragraph 401-4.16.

The Contractor shall repair low areas or areas that cannot be corrected by grinding by removal of deficient areas to the depth of the final course plus ½ inch and replacing with new material. Skin patching is not allowed.

**401-5.4 Sampling.** When directed by the RPR, the Contractor shall sample and test any material that appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

**401-5.5 Control charts.** The Contractor shall maintain linear control charts for both individual measurements and range (i.e. difference between highest and lowest measurements) for aggregate gradation, asphalt content, and VMA. The VMA for each day will be calculated and monitored by the QC laboratory.
Control charts shall be posted in a location satisfactory to the RPR and kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor’s test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor’s projected data during production indicates a problem and the Contractor is not taking satisfactory corrective action, the RPR may suspend production or acceptance of the material.

**a. Individual measurements.** Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation, asphalt content, and VMA. The control charts shall use the job mix formula target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

**Control Chart Limits for Individual Measurements**

<table>
<thead>
<tr>
<th>Sieve</th>
<th>Action Limit</th>
<th>Suspension Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4 inch</td>
<td>±6%</td>
<td>±9%</td>
</tr>
<tr>
<td>1/2 inch</td>
<td>±6%</td>
<td>±9%</td>
</tr>
<tr>
<td>3/8 inch</td>
<td>±6%</td>
<td>±9%</td>
</tr>
<tr>
<td>No. 4</td>
<td>±6%</td>
<td>±9%</td>
</tr>
<tr>
<td>No. 16</td>
<td>±5%</td>
<td>±7.5%</td>
</tr>
<tr>
<td>No. 50</td>
<td>±3%</td>
<td>±4.5%</td>
</tr>
<tr>
<td>No. 200</td>
<td>±2%</td>
<td>±3%</td>
</tr>
<tr>
<td>Asphalt Content</td>
<td>±0.45%</td>
<td>±0.70%</td>
</tr>
<tr>
<td>Minimum VMA</td>
<td>-0.5%</td>
<td>-1.0%</td>
</tr>
</tbody>
</table>

**b. Range.** Control charts shall be established to control gradation process variability. The range shall be plotted as the difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of \( n = 2 \). Should the Contractor elect to perform more than two tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for \( n = 3 \) and by 1.27 for \( n = 4 \).

**Control Chart Limits Based on Range**

<table>
<thead>
<tr>
<th>Sieve</th>
<th>Suspension Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 inch</td>
<td>11%</td>
</tr>
<tr>
<td>3/8 inch</td>
<td>11%</td>
</tr>
<tr>
<td>No. 4</td>
<td>11%</td>
</tr>
<tr>
<td>No. 16</td>
<td>9%</td>
</tr>
<tr>
<td>No. 50</td>
<td>6%</td>
</tr>
<tr>
<td>No. 200</td>
<td>3.5%</td>
</tr>
<tr>
<td>Asphalt Content</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

**c. Corrective Action.** The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

1. One point falls outside the Suspension Limit line for individual measurements or range; or
2. Two points in a row fall outside the Action Limit line for individual measurements.
401-5.6 QC reports. The Contractor shall maintain records and shall submit reports of QC activities daily, in accordance with Item C-100.

MATERIAL ACCEPTANCE

401-6.1 Acceptance sampling and testing. Unless otherwise specified, all acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the RPR at no cost to the Contractor except that coring as required in this section shall be completed and paid for by the Contractor.

   a. Quality assurance (QA) testing laboratory. The QA testing laboratory performing these acceptance tests will be accredited in accordance with ASTM D3666. The QA laboratory accreditation will be current and listed on the accrediting authority’s website. All test methods required for acceptance sampling and testing will be listed on the lab accreditation.

   b. Lot size. A standard lot will be equal to one day’s production divided into approximately equal sublots of between 400 to 600 tons. When only one or two sublots are produced in a day’s production, the sublots will be combined with the production lot from the previous or next day.

Where more than one plant is simultaneously producing asphalt for the job, the lot sizes will apply separately for each plant.

   c. Asphalt air voids. Plant-produced asphalt will be tested for air voids on a sublot basis.

      (1) Sampling. Material from each sublot shall be sampled in accordance with ASTM D3665. Samples shall be taken from material deposited into trucks at the plant or at the job site in accordance with ASTM D979. The sample of asphalt may be put in a covered metal tin and placed in an oven for not less than 30 minutes nor more than 60 minutes to maintain the material at or above the compaction temperature as specified in the JMF.

      (2) Testing. Air voids will be determined for each sublot in accordance with ASTM D3203 for a set of compacted specimens prepared in accordance with ASTM D6926.

   d. In-place asphalt mat and joint density. Each sublot will be tested for in-place mat and joint density as a percentage of the theoretical maximum density (TMD).

      (1) Sampling. The Contractor will cut minimum 5 inch diameter samples in accordance with ASTM D5361. The Contractor shall furnish all tools, labor, and materials for cleaning, and filling the cored pavement. Laitance produced by the coring operation shall be removed immediately after coring, and core holes shall be filled within one day after sampling in a manner acceptable to the RPR.

      (2) Bond. Each lift of asphalt shall be bonded to the underlying layer. If cores reveal that the surface is not bonded, additional cores shall be taken as directed by the RPR to determine the extent of unbonded areas. Unbonded areas shall be removed by milling and replaced at no additional cost as directed by the RPR.

      (3) Thickness. Thickness of each lift of surface course will be evaluated by the RPR for compliance to the requirements shown on the plans after any necessary corrections for grade. Measurements of thickness will be made using the cores extracted for each sublot for density measurement. The maximum allowable deficiency at any point will not be more than 1/4 inch less than the thickness indicated for the lift. Average thickness of lift, or combined lifts, will not be less than the indicated thickness. Where the thickness tolerances are not met, the lot or sublot shall be corrected by the Contractor at his expense by removing the deficient area and replacing with new pavement. The Contractor, at his expense, may take additional cores as approved by the RPR to circumscribe the deficient area.

      (4) Mat density. One core shall be taken from each sublot. Core locations will be determined by the RPR in accordance with ASTM D3665. Cores for mat density shall not be taken closer than one foot
from a transverse or longitudinal joint. The bulk specific gravity of each cored sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each sublot sample by the TMD for that sublot.

(5) Joint density. One core centered over the longitudinal joint shall be taken for each sublot that has a longitudinal joint. Core locations will be determined by the RPR in accordance with ASTM D3665. The bulk specific gravity of each core sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each joint density sample by the average TMD for the lot. The TMD used to determine the joint density at joints formed between lots will be the lower of the average TMD values from the adjacent lots.

401-6.2 Acceptance criteria.

a. General. Acceptance will be based on the implementation of the Contractor Quality Control Program (CQCP) and the following characteristics of the asphalt and completed pavements: air voids, mat density, joint density, and grade.

b. Air Voids and Mat density. Acceptance of each lot of plant produced material for mat density and air voids will be based on the percentage of material within specification limits (PWL). If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment will be determined in accordance with paragraph 401-8.1.

c. Joint density. Acceptance of each lot of plant produced asphalt for joint density will be based on the PWL. If the PWL of the lot is equal to or exceeds 90%, the lot will be considered acceptable. If the PWL is less than 80%, the Contractor shall cease operations and until the reason for poor compaction has been determined. If the PWL is less than 71%, the pay factor for the lot used to complete the joint will be reduced by five (5) percentage points. This lot pay factor reduction will be incorporated and evaluated in accordance with paragraph 401-8.1.

d. Grade. The final finished surface of the pavement shall be surveyed to verify that the grade elevations and cross-sections shown on the plans do not deviate more than 1/2 inch vertically.

Cross-sections of the pavement shall be taken at a minimum 50-foot longitudinal spacing and at all longitudinal grade breaks. Minimum cross-section grade points shall include grade at centerline, and edge of pavement.

The survey and documentation shall be stamped and signed by a licensed surveyor. Payment for sublots that do not meet grade for over 25% of the sublot shall not be more than 95%.

e. Profilograph roughness for QA Acceptance. The final profilograph shall be the full length of the project to facilitate testing of roughness between lots. The Contractor, in the presence of the RPR shall perform a profilograph roughness test on the completed project with a profilograph meeting the requirements of ASTM E1274 or a Class I inertial profiler meeting ASTM E950. Data and results shall be provided within 48 hrs of profilograph roughness tests.

The equipment shall utilize electronic recording and automatic computerized reduction of data to indicate “must grind” bumps and the Profile Index for the pavement using a 0.2-inch (5 mm) blanking band. The bump template must span one inch (25 mm) with an offset of 0.4 inches (10 mm). The profilograph must be calibrated prior to use and operated by a factory or State DOT approved, trained operator. Profilograms shall be recorded on a longitudinal scale of one inch (25 mm) equals 25 feet (7.5 m) and a vertical scale of one inch (25 mm) equals one inch (25 mm). Profilograph shall be performed one foot right and left of project centerline and 15 feet (4.5 m) right and left of project centerline. Any areas that indicate “must grind” shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing full depth of surface course, as directed by the RPR. Where corrections are necessary, a second profilograph run shall be performed to verify that the corrections produced an average profile index of 15 inches per mile per 1/10 mile or less.
401-6.3 Percentage of material within specification limits (PWL). The PWL will be determined in accordance with procedures specified in Item C-110. The specification tolerance limits (L) for lower and (U) for upper are contained in Table 5.

Table 5. Acceptance Limits for Air Voids and Density

<table>
<thead>
<tr>
<th>Test Property</th>
<th>Pavements Specification Tolerance Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L</td>
</tr>
<tr>
<td>Air Voids Total Mix (%)</td>
<td>2.0</td>
</tr>
<tr>
<td>Surface Course Mat Density (%)</td>
<td>92.8</td>
</tr>
<tr>
<td>Base Course Mat Density (%)</td>
<td>92.0</td>
</tr>
<tr>
<td>Joint density (%)</td>
<td>90.5</td>
</tr>
</tbody>
</table>

a. Outliers. All individual tests for mat density and air voids will be checked for outliers (test criterion) in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded, and the PWL will be determined using the remaining test values. The criteria in Table 5 is based on production processes which have a variability with the following standard deviations: Surface Course Mat Density (%), 1.30; Base Course Mat Density (%), 1.55; Joint Density (%), 1.55.

The Contractor should note that (1) 90 PWL is achieved when consistently producing a surface course with an average mat density of at least 94.5% with 1.30% or less variability, (2) 90 PWL is achieved when consistently producing a base course with an average mat density of at least 94.0% with 1.55% or less variability, and (3) 90 PWL is achieved when consistently producing joints with an average joint density of at least 92.5% with 1.55% or less variability.

401-6.4 Resampling pavement for mat density.

a. General. Resampling of a lot of pavement will only be allowed for mat density, and then, only if the Contractor requests same, in writing, within 48 hours after receiving the written test results from the RPR. A retest will consist of all the sampling and testing procedures contained in paragraphs 401-6.1d and 401-6.2b. Only one resampling per lot will be permitted.

(1) A redefined PWL will be calculated for the resampled lot. The number of tests used to calculate the redefined PWL will include the initial tests made for that lot plus the retests.

(2) The cost for resampling and retesting shall be borne by the Contractor.

b. Payment for resampled lots. The redefined PWL for a resampled lot will be used to calculate the payment for that lot in accordance with Table 6.

c. Outliers. Check for outliers in accordance with ASTM E178, at a significance level of 5%.

METHOD OF MEASUREMENT

401-7.1 Measurement. Asphalt shall be measured by the number of tons of asphalt used in the accepted work. Batch weights or truck scale weights will be used to determine the basis for the tonnage.

BASIS OF PAYMENT

401-8.1 Payment. Payment for a lot of asphalt meeting all acceptance criteria as specified in paragraph 401-6.2 shall be made based on results of tests for mat density and air voids. Payment for acceptable...
lots shall be adjusted according to paragraph 401-8.1c for mat density and air voids; and paragraph 401-6.2c for joint density, subject to the limitation that:

a. The total project payment for plant mix asphalt pavement shall not exceed 100 percent of the product of the contract unit price and the total number of tons of asphalt used in the accepted work.

b. The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

c. **Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with Table 6. A pay factor shall be calculated for both mat density and air voids. The lot pay factor shall be the higher of the two values when calculations for both mat density and air voids are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either mat density or air voids is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both mat density and air voids are less than 100%. If PWL for joint density is less than 71% then the lot pay factor shall be reduced by 5% but be no higher than 95%.

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 401-8.1a. Payment in excess of 100% for accepted lots of asphalt shall be used to offset payment for accepted lots of asphalt pavement that achieve a lot pay factor less than 100%.

Payment for sublots which do not meet grade in accordance with paragraph 401-6.2d after correction for over 25% of the sublot shall be reduced by 5%.

**Table 6. Price adjustment schedule**

<table>
<thead>
<tr>
<th>Percentage of material within specification limits (PWL)</th>
<th>Lot pay factor (percent of contract unit price)</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 – 100</td>
<td>106</td>
</tr>
<tr>
<td>90 – 95</td>
<td>PWL + 10</td>
</tr>
<tr>
<td>75 – 89</td>
<td>0.5 PWL + 55</td>
</tr>
<tr>
<td>55 – 74</td>
<td>1.4 PWL – 12</td>
</tr>
<tr>
<td>Below 55</td>
<td>Reject 2</td>
</tr>
</tbody>
</table>

1 Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment above 100% shall be subject to the total project payment limitation specified in paragraph 401-8.1a.

2 The lot shall be removed and replaced. However, the RPR may decide to allow the rejected lot to remain. In that case, if the RPR and Contractor agree in writing that the lot shall not be removed, it shall be paid for at 50% of the contract unit price and the total project payment shall be reduced by the amount withheld for the rejected lot.

d. **Profilograph Roughness.** Not used.

Payment will be made under:

- Item P-401-8.1 Bituminous Surface Course - per ton
- Item P-401-8.2 Bituminous Material, PG 70-28 – per ton

**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.
<table>
<thead>
<tr>
<th>ASTM Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM C29</td>
<td>Standard Test Method for Bulk Density (&quot;Unit Weight&quot;) and Voids in Aggregate</td>
</tr>
<tr>
<td>ASTM C88</td>
<td>Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate</td>
</tr>
<tr>
<td>ASTM C117</td>
<td>Standard Test Method for Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing</td>
</tr>
<tr>
<td>ASTM C127</td>
<td>Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregate</td>
</tr>
<tr>
<td>ASTM C136</td>
<td>Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates</td>
</tr>
<tr>
<td>ASTM C142</td>
<td>Standard Test Method for Clay Lumps and Friable Particles in Aggregates</td>
</tr>
<tr>
<td>ASTM C566</td>
<td>Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying</td>
</tr>
<tr>
<td>ASTM D75</td>
<td>Standard Practice for Sampling Aggregates</td>
</tr>
<tr>
<td>ASTM D946</td>
<td>Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction</td>
</tr>
<tr>
<td>ASTM D979</td>
<td>Standard Practice for Sampling Asphalt Paving Mixtures</td>
</tr>
<tr>
<td>ASTM D1188</td>
<td>Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples</td>
</tr>
<tr>
<td>ASTM D2172</td>
<td>Standard Test Method for Quantitative Extraction of Bitumen from Asphalt Paving Mixtures</td>
</tr>
<tr>
<td>ASTM D1461</td>
<td>Standard Test Method for Moisture or Volatile Distillates in Asphalt Paving Mixtures</td>
</tr>
<tr>
<td>ASTM D2041</td>
<td>Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures</td>
</tr>
<tr>
<td>ASTM D2489</td>
<td>Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures</td>
</tr>
<tr>
<td>ASTM D2726</td>
<td>Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures</td>
</tr>
<tr>
<td>ASTM D2950</td>
<td>Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods</td>
</tr>
<tr>
<td>ASTM D3203</td>
<td>Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures</td>
</tr>
<tr>
<td>ASTM D3665</td>
<td>Standard Practice for Random Sampling of Construction Materials</td>
</tr>
</tbody>
</table>
ASTM D3666 Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials


ASTM D4552 Standard Practice for Classifying Hot-Mix Recycling Agents

ASTM D4791 Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

ASTM D4867 Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures

ASTM D5361 Standard Practice for Sampling Compacted Asphalt Mixtures for Laboratory Testing

ASTM D5444 Standard Test Method for Mechanical Size Analysis of Extracted Aggregate

ASTM D5821 Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate


ASTM D6307 Standard Test Method for Asphalt Content of Hot Mix Asphalt by Ignition Method

ASTM D6373 Standard Specification for Performance Graded Asphalt Binder


ASTM D6926 Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus


ASTM D6995 Standard Test Method for Determining Field VMA based on the Maximum Specific Gravity of the Mix (Gmm)

ASTM E11 Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves

ASTM E178 Standard Practice for Dealing with Outlying Observations

ASTM E1274 Standard Test Method for Measuring Pavement Roughness Using a Profilograph

ASTM E950 Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces with an Accelerometer Established Inertial Profiling Reference

ASTM E2133 Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Association of State Highway and Transportation Officials (AASHTO)


AASHTO T329 Standard Method of Test for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method
AASHTO T324  Standard Method of Test for Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures
AASHTO T 340  Standard Method of Test for Determining the Rutting Susceptibility of Hot Mix Asphalt (APA) Using the Asphalt Pavement Analyzer (APA)

Asphalt Institute (AI)

- Asphalt Institute Handbook MS-26, Asphalt Binder
- Asphalt Institute MS-2 Mix Design Manual, 7th Edition
- AI State Binder Specification Database

Federal Highway Administration (FHWA)

- Long Term Pavement Performance Binder Program

Advisory Circulars (AC)

- AC 150/5320-6 Airport Pavement Design and Evaluation

FAA Orders

- 5300.1 Modifications to Agency Airport Design, Construction, and Equipment Standards

Software

- FAARFIELD

END OF ITEM P-401
ITEM P-603 EMULSIFIED ASPHALT TACK COAT

DESCRIPTION

603-1.1 This item shall consist of preparing and treating an asphalt or concrete surface with asphalt material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

603-2.1 Asphalt materials. The asphalt material shall be an emulsified asphalt as specified in ASTM D3628 as an asphalt application for tack coat appropriate to local conditions. The emulsified asphalt shall not be diluted. The Contractor shall provide a copy of the manufacturer’s Certificate of Analysis (COA) for the asphalt material to the Resident Project Representative (RPR) before the asphalt material is applied for review and acceptance. The furnishing of COA for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer’s COA may be subject to verification by testing the material delivered for use on the project.

CONSTRUCTION METHODS

603-3.1 Weather limitations. The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is 50°F or above; the temperature has not been below 35°F for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

603-3.2 Equipment. The Contractor shall provide equipment for heating and applying the emulsified asphalt material. The emulsion shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the emulsion. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour or seven (700) feet per minute.

The equipment will be tested under pressure for leaks and to ensure proper set-up before use to verify truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application, spray-bar height and pressure and pump speed, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use.

The distributor truck shall be equipped with a minimum 12-foot spreader spray bar with individual nozzle control with computer-controlled application rates. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the emulsion, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper. The distributor truck shall be equipped to effectively heat and mix the material to the required temperature prior to application as required. Heating and mixing shall be done in accordance with the manufacturer’s recommendations. Do not overheat or over mix the material.

The distributor shall be equipped with a hand sprayer.
Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

A power broom and/or power blower suitable for cleaning the surfaces to which the asphalt tack coat is to be applied shall be provided.

**603-3.3 Application of emulsified asphalt material.** The emulsified asphalt shall not be diluted. Immediately before applying the emulsified asphalt tack coat, the full width of surface to be treated shall be swept with a power broom and/or power blower to remove all loose dirt and other objectionable material.

The emulsified asphalt material shall be uniformly applied with an asphalt distributor at the rates appropriate for the conditions and surface specified in the table below. The type of asphalt material and application rate shall be approved by the RPR prior to application.

### Emulsified Asphalt

<table>
<thead>
<tr>
<th>Surface Type</th>
<th>Residual Rate, gal/SY</th>
<th>Emulsion Application Bar Rate, gal/SY</th>
</tr>
</thead>
<tbody>
<tr>
<td>New asphalt</td>
<td>0.02-0.05</td>
<td>0.03-0.07</td>
</tr>
<tr>
<td>Existing asphalt</td>
<td>0.04-0.07</td>
<td>0.06-0.11</td>
</tr>
<tr>
<td>Milled Surface</td>
<td>0.04-0.08</td>
<td>0.06-0.12</td>
</tr>
<tr>
<td>Concrete</td>
<td>0.03-0.05</td>
<td>0.05-0.08</td>
</tr>
</tbody>
</table>

After application of the tack coat, the surface shall be allowed to cure without being disturbed for the period of time necessary to permit drying and setting of the tack coat. This period shall be determined by the RPR. The Contractor shall protect the tack coat and maintain the surface until the next course has been placed. When the tack coat has been disturbed by the Contractor, tack coat shall be reapplied at the Contractor’s expense.

**603-3.4 Freight and waybills** The Contractor shall submit waybills and delivery tickets, during progress of the work. Before the final statement is allowed, file with the RPR certified waybills and certified delivery tickets for all emulsified asphalt materials used in the construction of the pavement covered by the contract. Do not remove emulsified asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

### METHOD OF MEASUREMENT

**603-4.1** The emulsified asphalt material for tack coat shall be measured by the gallon. Volume shall be corrected to the volume at 60°F in accordance with ASTM D1250. The emulsified asphalt material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of emulsified asphalt material more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas where hand spraying of the emulsified asphalt material is necessary. Water added to emulsified asphalt will not be measured for payment.
BASIS OF PAYMENT

603.5-1 Payment shall be made at the contract unit price per gallon of emulsified asphalt material. This price shall be full compensation for furnishing all materials, for all preparation, delivery, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-603-5.1 Bituminous Tack Coat - per gallon

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D2995 Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors
ASTM D3628 Standard Practice for Selection and Use of Emulsified Asphalts

END OF ITEM P-603
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ITEM P-610 CONCRETE FOR MISCELLANEOUS STRUCTURES

DESCRIPTION

610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

COARSE AGGREGATE GRADING REQUIREMENTS

<table>
<thead>
<tr>
<th>Maximum Aggregate Size</th>
<th>ASTM C33, Table 3 Grading Requirements (Size No.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/2 inch (37.5 mm)</td>
<td>467 or 4 and 67</td>
</tr>
<tr>
<td>1 inch (25 mm)</td>
<td>57</td>
</tr>
<tr>
<td>3/4 inch (19 mm)</td>
<td>67</td>
</tr>
<tr>
<td>1/2 inch (12.5 mm)</td>
<td>7</td>
</tr>
</tbody>
</table>
610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking.

Coarse aggregate may only be accepted from sources that have a 20-year service history for the same gradation to be supplied with no history of D-Cracking. Aggregates that do not have a 20-year record of service free from major repairs (less than 5% of slabs replaced) in similar conditions without D-cracking shall not be used unless the material currently being produced has a durability factor greater than or equal to 95 per ASTM C666. The Contractor shall submit a current certification and test results to verify the aggregate acceptability. Test results will only be accepted from a State Department of Transportation (DOT) materials laboratory or an accredited laboratory. Certification and test results which are not dated or which are over one (1) year old or which are for different gradations will not be accepted.

Crushed granite, calcite cemented sandstone, quartzite, basalt, diabase, rhyolite or trap rock are considered to meet the D-cracking test requirements but must meet all other quality tests specified in Item P-501.

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of ASTM C150 Type I or II.

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding, and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

610-2.8 Premolded joint material. Premolded joint material for expansion joints shall meet the requirements of ASTM D1751.
610-2.9 Joint filler. The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.

610-2.10 Steel reinforcement. Reinforcing shall consist of Grade 60 deformed bars and/or welded steel wire fabric conforming to the requirements of ASTM A615 or ASTM A1064, respectively.

610-2.11 Materials for curing concrete. Curing materials shall conform to one of the following:

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterproof Paper</td>
<td>ASTM C171</td>
</tr>
<tr>
<td>Clear or white Polyethylene Sheeting</td>
<td>ASTM C171</td>
</tr>
<tr>
<td>White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B</td>
<td>ASTM C309</td>
</tr>
</tbody>
</table>

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of 4000 psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.
610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85°F (30 °C), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day’s placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor’s expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.
METHOD OF MEASUREMENT

610-5.1 There shall be no separate measurement for furnishing all materials including reinforcement and embedded items and for all preparation, delivery, installation, and curing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

BASIS OF PAYMENT

610-6.1 There shall be no separate payment for furnishing all materials including reinforcement and embedded items and for all preparation, delivery, installation, and curing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

- ASTM A184: Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
- ASTM A615: Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
- ASTM A704: Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
- ASTM A706: Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
- ASTM A775: Standard Specification for Epoxy-Coated Steel Reinforcing Bars
- ASTM A884: Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
- ASTM A934: Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
- ASTM A1064: Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
- ASTM C31: Standard Practice for Making and Curing Concrete Test Specimens in the Field
- ASTM C33: Standard Specification for Concrete Aggregates
- ASTM C39: Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- ASTM C94: Standard Specification for Ready-Mixed Concrete
- ASTM C143: Standard Test Method for Slump of Hydraulic-Cement Concrete
- ASTM C171: Standard Specification for Sheet Materials for Curing Concrete
ASTM C172 Standard Practice for Sampling Freshly Mixed Concrete
ASTM C231 Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260 Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309 Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311 Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
ASTM C494 Standard Specification for Chemical Admixtures for Concrete
ASTM C618 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C666 Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685 Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C989 Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017 Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1077 Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157 Standard Performance Specification for Hydraulic Cement
ASTM C1602 Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D1751 Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
ASTM D1752 Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

American Concrete Institute (ACI)
ACI 305R Hot Weather Concreting
ACI 306R Cold Weather Concreting
ACI 308R Guide to External Curing of Concrete
ACI 309R Guide for Consolidation of Concrete

END OF ITEM P-610
ITEM P-620 RUNWAY AND TAXIWAY MARKING

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms “paint” and “marking material” as well as “painting” and “application of markings” are interchangeable throughout this specification.

MATERIALS

620-2.1 Materials acceptance. The Contractor shall furnish manufacturer’s certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer’s surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.
620-2.1 Marking materials.

### TABLE 1. MARKING MATERIALS

<table>
<thead>
<tr>
<th>Paint¹</th>
<th>Glass Beads²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Color</td>
</tr>
<tr>
<td>Waterborne Type II (Temporary)</td>
<td>White</td>
</tr>
<tr>
<td>Waterborne Type II (Temporary)</td>
<td>Yellow</td>
</tr>
<tr>
<td>Waterborne Type II (Temporary)</td>
<td>Red</td>
</tr>
<tr>
<td>Waterborne Type II (Temporary)</td>
<td>Black</td>
</tr>
<tr>
<td>Waterborne Type II (Temporary)</td>
<td>Yellow</td>
</tr>
<tr>
<td>Waterborne Type II (Blackout)</td>
<td>Black</td>
</tr>
<tr>
<td>Waterborne Type I, Gradation A</td>
<td>Pink</td>
</tr>
</tbody>
</table>

¹ See paragraph 620-2.2a

² See paragraph 620-2.2b

a. **Paint.** Paint shall be waterborne and preformed thermoplastic in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.

Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

b. **Reflective media.** Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type III.

Glass beads for red and pink paint shall meet the requirements for Type I, Gradation A.

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type I, Gradation A glass beads shall be used in red and pink paint.
CONSTRUCTION METHODS

620-3.1 Weather limitations. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without overspray. The marking equipment for both paint and beads shall be calibrated daily.

620-3.3 Preparation of surfaces. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminates that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

a. Preparation of new pavement surfaces. The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. Preparation of pavement to remove existing markings. Existing pavement markings shall be removed by rotary grinding, water blasting, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to ‘block out’ the removal area to eliminate ‘ghost’ markings.

c. Preparation of pavement markings prior to remarking. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

620-3.4 Layout of markings. The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 Application. A period of 30 days shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch in 50 feet, and marking dimensions and spacing shall be within the following tolerances:
MARKING DIMENSIONS AND SPACING TOLERANCE

<table>
<thead>
<tr>
<th>Dimension and Spacing</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 inch or less</td>
<td>±1/2 inch</td>
</tr>
<tr>
<td>greater than 36 inch to 6 feet</td>
<td>±1 inch</td>
</tr>
<tr>
<td>greater than 6 feet to 60 feet</td>
<td>±2 inch</td>
</tr>
<tr>
<td>greater than 60 feet</td>
<td>±3 inch</td>
</tr>
</tbody>
</table>

The paint shall be mixed in accordance with the manufacturer’s instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted. Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

620-3.7 Control strip. Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

620-3.8 Retro-reflectance. Reflectance shall be measured with a portable retro-reflectometer meeting ASTM E1710 (or equivalent). A total of 6 reading shall be taken over a 6 square foot area with 3 readings taken from each direction. The average shall be equal to or above the minimum levels of all readings which are within 30% of each other.

<table>
<thead>
<tr>
<th>Material</th>
<th>Retro-reflectance mcd/m²/lux</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
</tr>
<tr>
<td>Initial Type I</td>
<td>300</td>
</tr>
<tr>
<td>Initial Type III</td>
<td>600</td>
</tr>
<tr>
<td>Initial Thermoplastic</td>
<td>225</td>
</tr>
<tr>
<td>All materials, remark when less than¹</td>
<td>100</td>
</tr>
</tbody>
</table>

¹Prior to remarking determine if removal of contaminants on markings will restore retro-reflectance

620-3.9 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.
METHOD OF MEASUREMENT

620-4.1a The quantity of markings and associated surface preparation to be paid for shall be measured by the number of square feet of painting.

620-4.1b The quantity of temporary markings, including blackout of existing markings, to be paid for shall be the number of square feet of painting performed in accordance with the specifications and accepted by the RPR. Temporary marking includes surface preparation, application and complete removal of the temporary marking.

620-4.1c Installation and certification of the compass calibration pad, including temporary and permanent pavement marking, will not be measured for payment.

620-4.1d The quantity of painted pavement marking removal to be paid shall be the number of square feet of painted pavement marking removed in accordance with the specifications and accepted by the RPR.

BASIS OF PAYMENT

620-5.1 This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item complete in place and accepted by the RPR in accordance with these specifications.

620-5.2a Payment for markings shall be made at the contract price for by the number of square feet of painting and associated surface preparation.

620-5.2b Payment for temporary markings shall be made at the contract price for the number of square feet of painting. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

620-5.2c Payment shall be made at the contract lump sum price for installation and certification of the compass calibration pad. The price shall be full compensation for furnishing all materials and for all labor, equipment, tools and incidentals necessary to complete the item including, but not limited to, temporary and permanent pavement marking, and certification of the compass pad by geomagnetic survey.

620-5.2d Payment shall be at the contract unit price per square foot for removal of painted pavement markings. The price shall be full compensation for furnishing all materials and for all labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

Item P-620-5.1 Pavement Markings without Reflective Beads – Black Outline – per square foot

Item P-620-5.2 Pavement Markings without Reflective Beads – Prime Coat – per square foot

Item P-620-5.3 Temporary Pavement Markings – per square foot
REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476 Standard Classification for Dry Pigmentary Titanium Dioxide Products


ASTM D1652 Standard Test Method for Epoxy Content of Epoxy Resins

ASTM D2074 Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method

ASTM D2240 Standard Test Method for Rubber Property - Durometer Hardness

ASTM D7585 Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments

ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester


ASTM G154 Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24 Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings


Federal Specifications (FED SPEC)

FED SPEC TT-B-1325DBeads (Glass Spheres) Retro-Reflective

FED SPEC TT-P-1952F Paint, Traffic and Airfield Marking, Waterborne

FED STD 595 Colors used in Government Procurement

Commercial Item Description

A-A-2886B Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1 Standards for Airport Markings

AC 150/5320-12 Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

END OF ITEM P-620
ITEM D-701 PIPE FOR STORM DRAINS AND CULVERTS

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

- ASTM C76 Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- ASTM C1840 Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe

701-2.3 Concrete. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

701-2.4 Rubber gaskets. Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477. Rubber gaskets for zinc-coated steel pipe and precoated galvanized pipe shall conform to the requirements of ASTM D1056, for the “RE” closed cell grades. Rubber gaskets for steel reinforced thermoplastic ribbed pipe shall conform to the requirements of ASTM F477.

701-2.5 Joint mortar. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 Joint fillers. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 Plastic gaskets. Plastic gaskets shall conform to the requirements of ASTM C990.

701-2.8. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. When CLSM is used, all joints shall have gaskets.

701-2.9 Precast box culverts. Not used.

701-2.10 Precast concrete pipe. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than
the external diameter of the pipe plus 12 inches on each side. The trench walls shall be approximately vertical.

The Contractor shall comply with all current federal, state and local rules and regulations governing the safety of men and materials during the excavation, installation and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch or 1/2 inch for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 Bedding. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. Rigid pipe. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. Flexible pipe. For flexible pipe, the bed shall be roughly shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

<table>
<thead>
<tr>
<th>Pipe Corrugation Depth</th>
<th>Minimum Bedding Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>inch</td>
<td>inch</td>
</tr>
<tr>
<td>1/2</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2-1/2</td>
<td>3-1/2</td>
</tr>
</tbody>
</table>

c. Other pipe materials. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of 3/4 inches. For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 sieve. For all other areas, no more than 50% of the material shall pass the No. 200 sieve. The bedding shall have a thickness of at least 6 inches below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe’s vertical outside diameter.
701-3.3 Laying pipe. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line. Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer’s reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, (5) coupling bands.

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. Concrete pipe. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with butyl mastic meeting ASTM C990 or mortar when soil tight joints are required. Joints shall be thoroughly wetted before applying mortar or grout.

b. Metal pipe. Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.

c. PVC, Polyethylene, or Polypropylene pipe. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. Fiberglass pipe. Joints and fittings shall be as detailed on the plans and in accordance with the manufacturers recommendations. Joints shall meet the requirements of ASTM D4161 for flexible elastomeric seals.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor’s expense.

701-3.5-1 Embedment Material Requirements

a. Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. Plastic and fiberglass Pipe. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. Metal Pipe. Embedment material shall be granular as specified in the contract document and specifications, and shall be free of organic material, rock fragments larger than 1.5 inches in the greatest dimension and frozen lumps. As a minimum, backfill materials shall meet the requirements of ASTM D3282, A-1, A-2, or A-3. Embedment material shall extend to 12 inches above the top of the pipe.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches on each side of the pipe and shall be brought up one foot (30 cm) above the top of the pipe or to natural ground level, whichever is
greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe. When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches and shall be brought up evenly on each side of the pipe to one foot above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor’s responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 Overfill

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and relaid or replaced at the Contractor’s expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be placed and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D1557. The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 Inspection Requirements

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, “Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe.” Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet of pipe to be removed.

701-4.2 The length of pipe shall be measured in linear feet of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. The identify each class, types and size of pipe shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

BASIS OF PAYMENT

701-5.1 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and removal of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.2 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item. Payment will be made at the contract unit price per linear foot for each class and size of pipe installed.
Payment will be made under:

Item D-701-5.1 Remove Reinforced Concrete Pipe (10"-18") – per linear foot
Item D-701-5.2 Remove Corrugated Metal Pipe (15"-18") – per linear foot
Item D-701-5.3 Install New 18" RCP Class V, Complete – per linear foot
Item D-701-5.3 Install New 15" RCP Class V, Complete – per linear foot

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167 Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190 Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196 Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219 Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243 Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252 Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294 Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12-to 60-in.) Diameter
AASHTO M304 Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20 Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300-to 900-mm (12- to 36-in.) Diameter

ASTM International (ASTM)

ASTM A760 Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761 Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762 Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849 Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
| ASTM B745 | Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains |
| ASTM C14  | Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe |
| ASTM C76  | Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe |
| ASTM C94  | Standard Specification for Ready Mixed Concrete |
| ASTM C144 | Standard Specification for Aggregate for Masonry Mortar |
| ASTM C150 | Standard Specification for Portland Cement |
| ASTM C443 | Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets |
| ASTM C506 | Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe |
| ASTM C507 | Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe |
| ASTM C655 | Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe |
| ASTM C990 | Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants |
| ASTM C1433 | Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers |
| ASTM D1056 | Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber |
| ASTM D3034 | Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings |
| ASTM D3262 | Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe |
| ASTM D3282 | Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes |
| ASTM D4161 | Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals |
| ASTM D6690 | Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements |
| ASTM F477  | Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe |
| ASTM F667  | Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings |
| ASTM F714  | Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter |
| ASTM F794  | Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter |
| ASTM F894  | Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe |
ASTM F949 Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2562 Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736 Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764 Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881 Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415 Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

END OF ITEM D-701
REALIGNMENT OF TAXIWAY H AND ISSUED FOR BID
MILL/OVERSEY OF PORTIONS OF TAXIWAYS J AND B

4.B.1.b
ITEM D-705 PIPE UNDERDRAINS FOR AIRPORTS

DESCRIPTION

705-1.1 This item shall consist of the construction of pipe drains in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans.

MATERIALS

705-2.1 General. Materials shall meet the requirements shown on the plans and specified below.

705-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements.

<table>
<thead>
<tr>
<th>ASTM</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F794</td>
<td>Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe &amp; Fittings Based on Controlled Inside Diameter</td>
</tr>
<tr>
<td>F949</td>
<td>Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings</td>
</tr>
</tbody>
</table>

705-2.3 Joint mortar. Pipe joint mortar shall consist of one part by volume of Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

705-2.4 Elastomeric seals. Elastomeric seals shall conform to the requirements of ASTM F477.

705-2.5 Porous backfill. Porous backfill shall be free of clay, humus, or other objectionable matter, and shall conform to the gradation in Table 1 when tested in accordance with ASTM C136.

<table>
<thead>
<tr>
<th>Sieve Designation</th>
<th>Percentage by Weight Passing Sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porous Material No. 2</td>
<td></td>
</tr>
<tr>
<td>1-1/2 inch</td>
<td>100</td>
</tr>
<tr>
<td>1 inch</td>
<td>90 - 100</td>
</tr>
<tr>
<td>3/8 inch</td>
<td>25 - 60</td>
</tr>
<tr>
<td>No. 4</td>
<td>5 - 40</td>
</tr>
<tr>
<td>No. 8</td>
<td>0 - 20</td>
</tr>
</tbody>
</table>

When two courses of porous backfill are specified in the plans, the finer of the materials shall conform to particle size tabulated herein for porous material No. 1. The coarser granular material shall meet the gradation given in the tabulation for porous material No. 2.

705-2.6 Granular material. Granular material used for backfilling shall conform to the requirements of ASTM D2321 for Class IA, IB, or II materials.

705-2.7 Filter fabric. The filter fabric shall conform to the requirements of AASHTO M288 Class 2 or equivalent.
Table 2. Fabric Properties

<table>
<thead>
<tr>
<th>Fabric Property</th>
<th>Test Method</th>
<th>Test Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grab Tensile Strength, lbs</td>
<td>ASTM D4632</td>
<td>125 min</td>
</tr>
<tr>
<td>Grab Tensile Elongation %</td>
<td>ASTM D4632</td>
<td>50 min</td>
</tr>
<tr>
<td>Burst Strength, psi</td>
<td>ASTM D3785</td>
<td>125 min</td>
</tr>
<tr>
<td>Trapezoid Tear Strength, lbs</td>
<td>ASTM D4533</td>
<td>55 min</td>
</tr>
<tr>
<td>Puncture Strength, lbs</td>
<td>ASTM D4833</td>
<td>40 min</td>
</tr>
<tr>
<td>Abrasion, lbs</td>
<td>ASTM D4886</td>
<td>15 max loss</td>
</tr>
<tr>
<td>Equivalent Opening Size</td>
<td>ASTM D4751</td>
<td>70-100</td>
</tr>
<tr>
<td>Permittivity sec^-1</td>
<td>ASTM D4491</td>
<td>0.80</td>
</tr>
<tr>
<td>Accelerated Weathering (UV Stability)</td>
<td>ASTM D4355 *(500 hrs exposure)</td>
<td>70</td>
</tr>
</tbody>
</table>

705-2.8 Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. All joints shall have elastomeric seals.

CONSTRUCTION METHODS

705-3.1 Equipment. All equipment required for the construction of pipe underdrains shall be on the project, in good working condition, and approved by the RPR before construction is permitted to start.

705-3.2 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but shall not be less than the external diameter of the pipe plus 6 inches on each side of the pipe. The trench walls shall be approximately vertical.

Where rock, hardpan, or other unyielding material is encountered, it shall be removed below the foundation grade for a depth of at least 4 inches. The excavation below grade shall be backfilled with selected fine compressible material, such as silty clay or loam, and lightly compacted in layers not over 6 inches in uncompacted depth to form a uniform but yielding foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

Excavated material not required or acceptable for backfill shall be disposed of by the Contractor as directed by the RPR. The excavation shall not be carried below the required depth; if this occurs, the trench shall be backfilled at the Contractor’s expense with material approved by the RPR and compacted to the density of the surrounding material.

The pipe bedding shall be constructed uniformly over the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 inch when the bedding thickness is less than 6 inches, and 1-1/2 inch when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed, uncompacted material under the middle third of the pipe prior to placement of the pipe.

The Contractor shall do trench bracing, sheathing, or shoring necessary to perform and protect the excavation as required for safety and conformance to federal, state and local laws. Unless otherwise provided, the bracing, sheathing, or shoring shall be removed by the Contractor after the backfill has
reached at least 12 inches over the top of the pipe. The sheathing or shoring shall be pulled as the granular backfill is placed and compacted to avoid any unfilled spaces between the trench wall and the backfill material. The cost of bracing, sheathing, or shoring, and the removal of same, shall be included in the unit price bid per foot for the pipe.

705-3.3 Laying and installing pipe.

a. Concrete pipe. The laying of the pipe in the finished trench shall be started at the lowest point and proceed upgrade. When bell and spigot pipe is used, the bells shall be laid upgrade. If tongue and groove pipe is used, the groove end shall be laid upgrade. Holes in perforated pipe shall be placed down, unless otherwise shown on the plans. The pipe shall be firmly and accurately set to line and grade so that the invert will be smooth and uniform. Pipe shall not be laid on frozen ground.

Pipe which is not true in alignment, or which shows any settlement after laying, shall be taken up and re-laid by the Contractor at no additional expense. Making adjustments in grade by exerting force on the barrel of the pipe with excavating equipment, by lifting and dropping the pipe, or by lifting the pipe and packing bedding material under it shall be prohibited. If the installed pipe section is not to grade, the pipe section shall be completely removed, the grade corrected, and the pipe rejoined.”

b. Metal pipe. The metal pipe shall be laid with the separate sections joined firmly together with bands, with outside laps of circumferential joints pointing upgrade, and with longitudinal laps on the sides. Any metal in the pipe or bands that is not protected thoroughly by galvanizing shall be coated with a suitable asphaltum paint.

During installation, the asphalt-protected pipe shall be handled without damaging the asphalt coating. Any breaks in the bitumen or treatment of the pipe shall be refilled with the type and kind of bitumen used in coating the pipe originally.

c. PVC, fiberglass, or polyethylene pipe. PVC or polyethylene pipe shall be installed in accordance with the requirements of ASTM D2321. Perforations shall meet the requirements of AASHTO M252 or AASHTO M294 Class 2, unless otherwise indicated on the plans. The pipe shall be laid accurately to line and grade. Fiberglass per ASTM D3839 Standard Guide for Underground Installation of “Fiberglass” (Glass-Fiber Reinforced Thermosetting-Resin) Pipe.

d. All types of pipe. The upgrade end of pipelines, not terminating in a structure, shall be plugged or capped as approved by the RPR.

Unless otherwise shown on the plans, a 4-inch bed of granular backfill material shall be spread in the bottom of the trench throughout the entire length under all perforated pipe underdrains.

Pipe outlets for the underdrains shall be constructed when required or shown on the plans. The pipe shall be laid with tight-fitting joints. Porous backfill is not required around or over pipe outlets for underdrains. All connections to other drainage pipes or structures shall be made as required and in a satisfactory manner. If connections are not made to other pipes or structures, the outlets shall be protected and constructed as shown on the plans.

e. Filter fabric. The filter fabric shall be installed in accordance with the manufacturer’s recommendations, or in accordance with the AASHTO M288 Appendix, unless otherwise shown on the plans.

705-3.4 Mortar. The mortar shall be of the desired consistency for caulking and filling the joints of the pipe and for making connections to other pipes or to structures. Mortar that is not used within 45 minutes after water has been added shall be discarded. Retempering of mortar shall not be permitted.

705-3.5 Joints in concrete pipe. When open or partly open joints are required or specified, they shall be constructed as indicated on the plans. The pipe shall be laid with the ends fitted together as designed. If bell and spigot pipe is used, mortar shall be placed along the inside bottom quarter of the bell to center the following section of pipe.
The open or partly open joints shall be surrounded with granular material meeting requirements of porous backfill No. 2 in Table 1 or as indicated on the plans. This backfill shall be placed so its thickness will be not less than 3 inches nor more than 6 inches, unless otherwise shown on the plans.

When the original material excavated from the trench is impervious, commercial concrete sand or granular material meeting requirements of porous backfill No. 1 shall surround porous backfill No. 2 (Table 1), as shown on the plans or as directed by the RPR.

When the original material excavated from the trench is pervious and suitable, it may be used as backfill in lieu of porous backfill No. 1, when indicated on the plans or as directed by the RPR.

705-3.6 Embedment and Backfill

a. Earth. All trenches and excavations shall be backfilled soon after the pipes are installed, unless additional protection of the pipe is directed. The embedment material shall be select material from excavation or borrow and shall be approved by the RPR. The select material shall be placed on each side of the pipe out to a distance of the nominal pipe diameter and one foot (30 cm) over the top of the pipe and shall be readily compacted. It shall not contain stones 3 inches (75 mm) or larger in size, frozen lumps, chunks of highly plastic clay, or any other material that is objectionable to the RPR. The material shall be moistened or dried, as required to aid compaction. Placement of the embedment material shall not cause displacement of the pipe. Thorough compaction under the haunches and along the sides to the top of the pipe shall be obtained.

The embedment material shall be placed in loose layers not exceeding 6 inches in depth under and around the pipe. Backfill material over the pipe shall be placed in lifts not exceeding 8 inches. Successive layers shall be added and thoroughly compacted by hand and pneumatic tampers, approved by the RPR, until the trench is completely filled and brought to the planned elevation. Embedment and backfilling shall be done to avoid damaging top or side of the pipe.

In embankments and other unpaved areas, the backfill shall be compacted per Item P-152 to the density required for embankments in unpaved areas. Under paved areas, the subgrade and any backfill shall be compacted per Item P-152 to the density required for embankments for paved areas.

b. Granular backfill. When granular backfill is required, placement in the trench and about the pipe shall be as shown on the plans. The granular backfill shall not contain an excessive amount of foreign matter, nor shall soil from the sides of the trench or from the soil excavated from the trench be allowed to filter into the granular backfill. When required by the RPR, a template shall be used to properly place and separate the two sizes of backfill. The backfill shall be placed in loose layers not exceeding 6 inches in depth. The granular backfill shall be compacted by hand and pneumatic tampers to the requirements as given for embankment. Backfilling shall be done to avoid damaging top or side pressure on the pipe. The granular backfill shall extend to the elevation of the trench or as shown on the plans.

When perforated pipe is specified, granular backfill material shall be placed along the full length of the pipe. The position of the granular material shall be as shown on the plans. If the original material excavated from the trench is pervious and suitable, it shall be used in lieu of porous backfill No. 1.

If porous backfill is placed in paved or adjacent to paved areas before grading or subgrade operations is completed, the backfill material shall be placed immediately after laying the pipe. The depth of the granular backfill shall be not less than 12 inches, measured from the top of the underdrain. During subsequent construction operations, a minimum depth of 12 inches of backfill shall be maintained over the underdrains. When the underdrains are to be completed, any unsuitable material shall be removed exposing the porous backfill. Porous backfill containing objectionable material shall be removed and replaced with suitable material. The cost of removing and replacing any unsuitable material shall be at the Contractor’s expense.

If a granular subbase blanket course is used which extends several feet beyond the edge of paving to the outside edge of the underdrain trench, the granular backfill material over the underdrains shall be placed in the trench up to an elevation of 2 inches above the bottom surface of the granular subbase.
blanket course. Immediately prior to the placing of the granular subbase blanket course, the Contractor shall blade this excess trench backfill from the top of the trench onto the adjacent subgrade where it can be incorporated into the granular subbase blanket course. Any unsuitable material that remains over the underdrain trench shall be removed and replaced. The subbase material shall be placed to provide clean contact between the subbase material and the underdrain granular backfill material for the full width of the underdrain trench.

c. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153.

705-3.7 Flexible Pipe Ring Deflection. Not used.

705-3.8 Connections. When the plans call for connections to existing or proposed pipe or structures, these connections shall be watertight and made to obtain a smooth uniform flow line throughout the drainage system.

705-3.9 Cleaning and restoration of site. After the backfill is completed, the Contractor shall dispose of all surplus material, soil, and rubbish from the site. Surplus soil may be deposited in embankments, shoulders, or as directed by the RPR. Except for paved areas of the airport, the Contractor shall restore all disturbed areas to their original condition.

METHOD OF MEASUREMENT

705-4.1 The length of pipe shall be the number of linear feet of pipe underdrains to be removed, completed, and approved.

705-4.2 The quantity of perforated pipe underdrains shall be made at the contract unit price per linear foot complete, including porous backfill and filter fabric.

705-4.3 The quantity of non-perforated pipe underdrains shall be made at the contract unit price per linear foot complete, including porous backfill and filter fabric.

705-4.4 The quantity of underdrain cleanouts shall be made at the contract unit price per each, complete.

BASIS OF PAYMENT

705-5.1 Payment will be made at the contract unit price per linear foot for pipe underdrains to be removed.

705-5.2 Payment will be made at the contract unit price per linear foot for perforated pipe underdrains to be installed of the type, class, and size designated.

705-5.3 Payment will be made at the contract unit price per linear foot for non-perforated pipe underdrains to be installed of the type, class, and size designated.

705-5.4 Underdrain cleanouts, Complete. Underdrain cleans shall be made at the contract unit price per each, complete.

These prices shall be full compensation for furnishing all materials and for all preparation, excavation, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.
Payment will be made under:

Item D-705-5.1  Remove and cap 4" Underdrain Pipe and Cleanout, Complete - per linear foot
Item D-705-5.2  4-Inch PVC Perforated Underdrain Pipe, Complete - per linear foot
Item D-705-5.3  4-Inch PVC Non-Perforated Underdrain Pipe, Complete - per linear foot
Item D-705-5.4  4-Inch PVC Underdrain Cleanout, Complete - per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

**ASTM International (ASTM)**

- ASTM A760  Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
- ASTM A762  Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
- ASTM C136  Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
- ASTM C144  Standard Specification for Aggregate for Masonry Mortar
- ASTM C150  Standard Specification for Portland Cement
- ASTM C444  Standard Specification for Perforated Concrete Pipe
- ASTM C654  Standard Specification for Porous Concrete Pipe
- ASTM D2321  Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
- ASTM D3262  Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
- ASTM D4161  Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
- ASTM F477  Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
- ASTM F794  Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
- ASTM F949  Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
- ASTM F2562  Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage

**American Association of State Highway and Transportation Officials (AASHTO)**

- AASHTO M190  Standard Specification for Bituminous - Coated Corrugated Metal Culvert Pipe and Pipe Arches
- AASHTO M196  Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
- AASHTO M252  Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M288 Standard Specification for Geotextile Specification for Highway Applications
AASHTO M294 Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500- mm (12- to 60-in.) Diameter
AASHTO M304 Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20 Standard Specification for Steel-Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) diameter
AASHTO Standard Specifications for Highway Bridges

END OF ITEM D-705
ITEM D-751 MANHOLES, CATCH BASINS, INLETS AND INSPECTION HOLES

DESCRIPTION

751-1.1 This item shall consist of construction of manholes, catch basins, inlets, and inspection holes, in accordance with these specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the plans or required by the RPR.

MATERIALS

751-2.1 Brick. The brick shall conform to the requirements of ASTM C32, Grade MS.

751-2.2 Mortar. Mortar shall consist of one part Portland cement and two parts sand. The cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

751-2.3 Concrete. Plain and reinforced concrete used in structures, connections of pipes with structures, and the support of structures or frames shall conform to the requirements of Item P-610.

751-2.4 Precast concrete pipe manhole rings. Precast concrete pipe manhole rings shall conform to the requirements of ASTM C478. Unless otherwise specified, the risers and offset cone sections shall have an inside diameter of not less than 36 inches nor more than 48 inches. There shall be a gasket between individual sections and sections cemented together with mortar on the inside of the manhole. Gaskets shall conform to the requirements of ASTM C443.

751-2.5 Corrugated metal. Corrugated metal shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M36.

751-2.6 Frames, covers, and grates. The castings shall conform to one of the following requirements:
   a. ASTM A48, Class 35B: Gray iron castings
   b. ASTM A47: Malleable iron castings
   c. ASTM A27: Steel castings
   d. ASTM A283, Grade D: Structural steel for grates and frames
   e. ASTM A536, Grade 65-45-12: Ductile iron castings
   f. ASTM A897: Austempered ductile iron castings

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings, aircraft gear configuration and/or direct loading, specified. Each frame and cover or grate unit shall be provided with fastening members to prevent it from being dislodged by traffic but which will allow easy removal for access to the structure. All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

751-2.7 Steps. The steps or ladder bars shall be gray or malleable cast iron or galvanized steel. The steps shall be the size, length, and shape shown on the plans and those steps that are not galvanized shall be given a coat of asphalt paint, when directed.

751-2.8 Precast inlet structures. Manufactured in accordance with and conforming to ASTM C913.
CONSTRUCTION METHODS

751-3.1 Unclassified excavation.

a. The Contractor shall excavate for structures and footings to the lines and grades or elevations, shown on the plans, or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximately only; and the RPR may direct, in writing, changes in dimensions or elevations of footings necessary for a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. Where concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing is placed.

c. The Contractor shall do all bracing, sheathing, or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for the structure.

d. All bracing, sheathing, or shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage finished masonry. The cost of removal shall be included in the unit price bid for the structure.

e. After excavation is completed for each structure, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

751-3.2 Brick structures.

a. Foundations. A prepared foundation shall be placed for all brick structures after the foundation excavation is completed and accepted. Unless otherwise specified, the base shall consist of reinforced concrete mixed, prepared, and placed in accordance with the requirements of Item P-610.

b. Laying brick. All brick shall be clean and thoroughly wet before laying so that they will not absorb any appreciable amount of additional water at the time they are laid. All brick shall be laid in freshly made mortar. Mortar not used within 45 minutes after water has been added shall be discarded. Retempering of mortar shall not be permitted. An ample layer of mortar shall be spread on the beds and a shallow furrow shall be made in it that can be readily closed by the laying of the brick. All bed and head joints shall be filled solid with mortar. End joints of stretchers and side or cross joints of headers shall be fully buttered with mortar and a shoved joint made to squeeze out mortar at the top of the joint. Any bricks that may be loosened after the mortar has taken its set, shall be removed, cleaned, and re-laid with fresh mortar. No broken or chipped brick shall be used in the face, and no spalls or bats shall be used except where necessary to shape around irregular openings or edges; in which case, full bricks shall be placed at ends or corners where possible, and the bats shall be used in the interior of the course. In making closures, no piece of brick shorter than the width of a whole brick shall be used; and wherever practicable, whole brick shall be used and laid as headers.

c. Joints. All joints shall be filled with mortar at every course. Exterior faces shall be laid up in advance of backing. Exterior faces shall be plastered or parged with a coat of mortar not less than 3/8 inch (9 mm) thick before the backing is laid up. Prior to parging, all joints on the back of face courses shall be cut flush. Unless otherwise noted, joints shall be not less than 1/4 inch nor more than 1/2 inch wide and the selected joint width shall be maintained uniform throughout the work.

d. Pointing. Face joints shall be neatly struck, using the weather-struck joint. All joints shall be finished properly as the laying of the brick progresses. When nails or line pins are used, the holes shall be immediately plugged with mortar and pointed when the nail or pin is removed.
e. **Cleaning.** Upon completion of the work all exterior surfaces shall be thoroughly cleaned by scrubbing and washing with water. If necessary to produce satisfactory results, cleaning shall be done with a 5% solution of muriatic acid which shall then be rinsed off with liberal quantities of water.

f. **Curing and cold weather protection.** The brick masonry shall be protected and kept moist for at least 48 hours after laying the brick. Brick masonry work or pointing shall not be done when there is frost on the brick or when the air temperature is below 50°F unless the Contractor has, on the project ready to use, suitable covering and artificial heating devices necessary to keep the atmosphere surrounding the masonry at a temperature of not less than 60°F for the duration of the curing period.

**751-3.3 Concrete structures.** Concrete structures which are to be cast-in-place within the project boundaries shall be built on prepared foundations, conforming to the dimensions and shape indicated on the plans. The construction shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

All invert channels shall be constructed and shaped accurately to be smooth, uniform, and cause minimum resistance to flowing water. The interior bottom shall be sloped to the outlet.

**751-3.4 Precast concrete structures.** Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program.

Precast concrete structures shall conform to ASTM C478. Precast concrete structures shall be constructed on prepared or previously placed slab foundations conforming to the dimensions and locations shown on the plans. All precast concrete sections necessary to build a completed structure shall be furnished. The different sections shall fit together readily. Joints between precast concrete risers and tops shall be full-bedded in cement mortar and shall: (1) be smoothed to a uniform surface on both interior and exterior of the structure or (2) utilize a rubber gasket per ASTM C443. The top of the upper precast concrete section shall be suitably formed and dimensioned to receive the metal frame and cover or grate, or other cap, as required. Provision shall be made for any connections for lateral pipe, including drops and leads that may be installed in the structure. The flow lines shall be smooth, uniform, and cause minimum resistance to flow. The metal or metal encapsulated steps that are embedded or built into the side walls shall be aligned and placed in accordance to ASTM C478. When a metal ladder replaces the steps, it shall be securely fastened into position.

**751-3.5 Corrugated metal structures.** Corrugated metal structures shall be prefabricated. All standard or special fittings shall be furnished to provide pipe connections or branches with the correct dimensions and of sufficient length to accommodate connecting bands. The fittings shall be welded in place to the metal structures. The top of the metal structure shall be designed so that either a concrete slab or metal collar may be attached to allow the fastening of a standard metal frame and cover or grate. Steps or ladders shall be furnished as shown on the plans. Corrugated metal structures shall be constructed on prepared foundations, conforming to the dimensions and locations as shown on the plans. When indicated, the structures shall be placed on a reinforced concrete base.

**751-3.6 Inlet and outlet pipes.** Inlet and outlet pipes shall extend through the walls of the structures a sufficient distance beyond the outside surface to allow for connections. They shall be cut off flush with the wall on the inside surface of the structure, unless otherwise directed. For concrete or brick structures, mortar shall be placed around these pipes to form a tight, neat connection.

**751-3.7 Placement and treatment of castings, frames, and fittings.** All castings, frames, and fittings shall be placed in the positions indicated on the plans or as directed by the RPR, and shall be set true to line and elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.
When frames or fittings are placed on previously constructed masonry, the bearing surface of the masonry shall be brought true to line and grade and shall present an even bearing surface so the entire face or back of the unit will come in contact with the masonry. The unit shall be set in mortar beds and anchored to the masonry as indicated on the plans or as directed by the RPR. All units shall set firm and secure.

After the frames or fittings have been set in final position, the concrete or mortar shall be allowed to harden for seven (7) days before the grates or covers are placed and fastened down.

**751-3.8 Installation of steps.** The steps shall be installed as indicated on the plans or as directed by the RPR. When the steps are to be set in concrete, they shall be placed and secured in position before the concrete is placed. When the steps are installed in brick masonry, they shall be placed as the masonry is being built. The steps shall not be disturbed or used until the concrete or mortar has hardened for at least seven (7) days. After seven (7) days, the steps shall be cleaned and painted, unless they have been galvanized.

When steps are required with precast concrete structures they shall meet the requirements of ASTM C478. The steps shall be cast into the side of the sections at the time the sections are manufactured or set in place after the structure is erected by drilling holes in the concrete and cementing the steps in place.

When steps are required with corrugated metal structures, they shall be welded into aligned position at a vertical spacing of 12 inches.

Instead of steps, prefabricated ladders may be installed. For brick or concrete structures, the ladder shall be held in place by grouting the supports in drilled holes. For metal structures, the ladder shall be secured by welding the top support to the structure and grouting the bottom support into drilled holes in the foundation or as directed by the RPR.

**751-3.9 Backfilling.**

- **a.** After a structure has been completed, the area around it shall be backfilled with approved material, in horizontal layers not to exceed 8 inches in loose depth, and compacted to the density required in Item P-152. Each layer shall be deposited evenly around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

- **b.** Backfill shall not be placed against any structure until approved by the RPR. For concrete structures, approval shall not be given until the concrete has been in place seven (7) days, or until tests establish that the concrete has attained sufficient strength to withstand any pressure created by the backfill and placing methods.

- **c.** Backfill shall not be measured for direct payment. Performance of this work shall be considered an obligation of the Contractor covered under the contract unit price for the structure involved.

**751-3.10 Cleaning and restoration of site.** After the backfill is completed, the Contractor shall dispose of all surplus material, dirt, and rubbish from the site. Surplus dirt may be deposited in embankments, shoulders, or as approved by the RPR. The Contractor shall restore all disturbed areas to their original condition. The Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

**METHOD OF MEASUREMENT**

**751-4.1** Manholes, catch basins, inlets, and inspection holes shall be measured by the unit.
BASIS OF PAYMENT

751-5.1 The accepted quantities of manholes, catch basins, inlets, and inspection holes will be paid for at the contract unit price per each in place when completed. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials; furnishing and installation of such specials and connections to pipes and other structures as may be required to complete the item as shown on the plans; and for all labor equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

Item D-751-5.1 Inlet Removal - per each
Item D-751-5.2 Install Underdrain Inspection Pit - per each
Item D-751-5.3 Tie to existing Inlet/Catch Basin - per each
Item D-751-5.4 Install New Inlet, Type I - per each
Item D-751-5.5 Install New Manhole, Type I - per each
Item D-751-5.6 Adjust Manhole - per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A27 Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47 Standard Specification for Ferritic Malleable Iron Castings
ASTM A48 Standard Specification for Gray Iron Castings
ASTM A283 Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536 Standard Specification for Ductile Iron Castings
ASTM A897 Standard Specification for Austempered Ductile Iron Castings
ASTM C32 Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)
ASTM C144 Standard Specification for Aggregate for Masonry Mortar
ASTM C150 Standard Specification for Portland Cement
ASTM C478 Standard Specification for Precast Reinforced Concrete Manhole Sections
American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M36 Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains

END OF ITEM D-751
ITEM L-105 MODIFICATION, REMOVAL, AND DEMOLITION OF AIRFIELD LIGHTING SYSTEMS

GENERAL

105-1.1 Definitions.

a. Modification shall mean any change or rearrangement in the component parts, including structural, mechanical, electrical systems, or internal or external arrangements of existing equipment or structures.

b. Removal shall mean the dismantling of existing materials, components, equipment, and utilities. Removal of existing equipment, etc., shall be performed carefully to prevent damage to existing equipment. Removed items not to be reinstalled shall be delivered and turned over to airport maintenance, unless otherwise directed by the RPR, in which case these items shall be disposed of off airport property at the Contractor’s expense.

c. Demolition shall mean the dismantling and disposal of existing materials, components, equipment, and utilities which cannot or will not be reused or which will have no salvage value, or which cannot be reused due to unrepairable damage caused by age, non-demolition related reasons, etc. All demolished items not designated to be turned over to the Owner shall be disposed of in a safe manner and at a location acceptable to the Owner.

105-1.2 General. All items to be turned over to the Owner shall be properly enclosed or boxed to protect the items from damage and transported by the Contractor to a location on the Owner’s property, designated by the Engineer and/or the Owner.

The installation and/or removal of lighting equipment may be critical to airport operations; therefore, the Contractor shall follow the work schedule established in the plans and specifications or as directed by the Engineer. The system shall be installed in accordance with the National Electrical Code and/or local code requirements.

The Contractor shall provide temporary wiring as required to reconnect existing circuits to provide guidance for aircraft to pass through the construction areas on those taxiways/runways which must remain open. The Contractor shall check all temporary circuits before dark each day to assure that they are operational. In the event of failure, the Contractor shall immediately take steps to restore operation.

105-1.3 Condition of Existing Facilities. The Contractor shall verify the areas, conditions, and features necessary to tie into existing construction. This verification shall be done prior to submittal of shop drawings, fabrication or erection, construction or installation. The Contractor shall be responsible for the accurate tie-in of the new work to existing facilities.

Special attention is called to the fact that there may be conduit, cable, fixtures or other items in the existing systems which must be removed or relocated in order to perform the modification work. All conduit, wiring, boxes, etc., that do not comply with the contract documents shall be removed or corrected to comply with the contract documents. All unused conduit not removed shall be identified and a pull line shall be installed. The work shall include all removal and relocation required for completion of the modifications and the new construction.

105-1.4 Safety Requirements. The Contractor shall conduct alterations and removal operations in a manner that will ensure the safety of persons in accordance with the requirements of CFR 29 PART 1926 and 1910.
As a minimum, work place safety shall comply with NFPA 70E, OSHA, federal, state and local requirements. Where a conflict occurs, the most stringent requirement shall govern.

The Contractor shall comply with the Construction Safety and Phasing Plan (CSPP).

105-1.5 Classification of Removed/Demolished Items. Existing materials and equipment indicated to be removed will be classified as "salvageable" and shall remain the property of the Owner or will be classified as "debris" and shall be disposed of legally off the airport.

Reusable salvaged items - Salvaged materials and equipment shall be reused in the work as described on the contract drawings, unless noted otherwise.

Retained salvaged items - Salvaged materials and equipment to be retained by the Owner but not reused in the work shall be turned over to the Owner at a site at the facility to be determined by the Owner. Retained salvaged items shall be stored on Owner property where indicated by the Owner.

Items classified as debris shall be legally disposed of off the airport property. The cost of such disposal shall be included in the cost of other items of work.

105-1.6 Temporary Protection. The Contractor shall provide and maintain the following requirements:

a. Protection of persons and property shall be provided throughout the progress of the work in accordance with the contract documents.

b. Provide temporary enclosures and partitions prior to starting modification and removal/demolition work. Such items shall protect existing materials, equipment, and other remaining building or system components from damage by weather and construction operations. Temporary enclosures shall isolate space utilized by equipment during construction, from dirt, dust, noise, and unauthorized entry.

c. Provide temporary exits, entrances, and protected passages where work prevents the use of existing facilities.

d. Provide weathertight temporary enclosures over and around openings to be made to existing exteriors of facilities prior to the start of work. The Contractor shall maintain such temporary enclosures until new construction will protect the interior of existing facilities from the elements.

e. Provide temporary exterior wall construction which will be designed and fabricated to resist an applied horizontal wind pressure of not less than 130 mph.

f. Provide temporary exterior roof construction which will be capable of supporting an applied vertical live load of not less than 200 psf, uniformly distributed over the entire roof area.

g. Design and fabricate temporary enclosures to maintain temperatures inside the existing facilities within a range of plus-or-minus 5 degrees F of normal operating conditions.

h. Provide temporary jet blast structures which will withstand the jet blast with a safety factor of 2.

EXECUTION

105-2.1 Disconnecting Utilities. Prior to the start of work, the necessary utilities serving each area of modification, removal, or demolition will be shut off by the Owner and shall be disconnected and sealed by the Contractor, as required. Lockout/Tag/Try procedures shall be utilized in accordance with airport approved procedures.
Prior to the disconnection, interruption or removal of any circuit supplying power to an FAA owned and maintained facility, the Contractor must notify the local FAA or authorized representative 48 hours in advance and be granted permission.

**105-2.2 Temporary Utility Services.** The Contractor shall install temporary utility services in satisfactory operating condition before disconnecting existing utilities. Such temporary services shall be maintained during the period of construction and removed only after new permanent services have been tested and are in operation.

**105-2.3 Temporary Airport Lighting Systems.** The Contractor shall maintain the airport lighting systems during the various phases of the work as shown on the phasing plan(s) or as directed by the Engineer. The Contractor shall be responsible for all temporary connections in the field or at the regulator necessary for operation of the circuits during construction. All existing electrical equipment and lighting systems shall be kept in operation, unless prior approval of the Engineer has been received and as otherwise specified below and on the Drawings. The Contractor may use salvaged materials for temporary construction where required. The permission for temporary work and using salvaged materials shall be obtained from the Engineer. Lighting for active runway and taxiway surfaces shall be maintained at all times. Temporary electrical fixtures and conductors are allowable when necessary, but shall be installed as follows:

a. Temporary lights shall be bolted to the pavement in a manner rendering the light stationery and allowing space for conductors to enter or exit and to be spliced.

b. When the above is not practical, lights shall be fastened to a weighted object adaptable for the purpose and of sufficient weight to inhibit movement by jet engine blast.

c. Temporary conductors supplying temporary lights shall be installed in a rigid galvanized steel conduit system and secured every five feet to prevent movement by jet engine blast. Conduit shall comply with Item L-110.

d. All joints or splices in temporary conductors shall have heat shrink tubing with integral sealant applied to secure mechanical and electrical connection and prevent water entry.

e. All plug-in connections shall have heat shrink tubing with integral sealant applied to prevent accidental disconnection and shall be color code taped to expedite quick, efficient disconnection and restoration.

f. Temporary airfield lighting and signage shall conform as closely as possible to permanent locations normally on the taxiway or runway and that shall guide aircraft in a safe path away from all possible accident prone areas.

Closed taxiways and runways shall be so marked in a manner acceptable to FAA and the Owner and said marking shall be kept in acceptable condition. This item shall include, at the Engineer’s discretion the temporary removal or covering of airfield signage.

**CAUTION:** The series lighting circuit must always be complete before a regulator is energized. Normal circuit voltage is less than 5,000 volts, open circuit voltage can be more than 10,000 volts. All personnel shall be instructed to protect the integrity of the lighting circuit. Turn off, lock out and tag the constant current regulator at the vault before opening the circuit. Continuity of the circuit shall be checked before the regulator is reconnected and reenergized.

The installation and/or removal of lighting equipment may be critical to airport operations; therefore, the Contractor shall follow work schedules established in the plans and specifications or as directed by the Engineer. The temporary system shall be installed in accordance with the contract documents, FAA.
Advisory Circulars and if applicable the National Electrical Code and/or local code requirements.

The Contractor shall provide temporary wiring as required to reconnect existing airfield lighting and signage to provide guidance for aircraft to pass through the construction areas on those taxiways/runways, which must remain open. Cable shall comply with Item L-108.

It shall be the Contractor's responsibility to determine that all airfield lighting circuits, except those that are serving closed taxiways or runways, are completely operational, using tower controls (if applicable), at the end of each work shift and shall so certify to the Engineer before leaving the work site. Day shift report of system operation shall be at 4 p.m. Second shift report shall be 1 hour before dark. Any other shift shall report 1 hour prior to the need for airfield lighting or as determined by the Engineer. Should bad weather cause poor visibility, the Engineer may require additional status reports of system operability and may call for the operation of the lighting system at any time. In the event of lighting system failure, the Contractor shall immediately take the necessary steps to restore proper operation.

Whenever the scope of work requires connection to an existing circuit, the circuit's insulation resistance shall be tested, in the presence of the Engineer. This test shall be performed in accordance with paragraph L-108-2.1f and L-108-2.11 prior to any activity affecting the respective circuit. The Contractor shall record the results. When the circuit is returned to its final condition, the circuit’s insulation resistance shall be checked again in the presence of the Engineer. The Contractor shall record the results. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs, to the circuit, to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, etc. if necessary, shall be borne by the Contractor. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.

105-2.4 Removal Work. The Contractor shall not disturb the existing construction beyond that indicated or necessary for installation of new work. Temporary shoring and bracing for support of building components to prevent settlement or other movement shall be as indicated and as required to protect the work.

The Contractor shall provide protective measures to control accumulation and migration of dust and dirt in all areas of work, particularly those adjacent to occupied areas. The Contractor shall remove dust, dirt, and debris from the areas of work daily.

105-2.5 Backfilling for Removal of Light Bases and Equipment Foundations. After a light base or equipment foundation has been removed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the Engineer.

Where required, the Engineer may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

Where light bases or equipment foundations have been removed from existing pavement to remain, the void shall be filled with P-610 concrete.

105-2.6 Salvageable Materials and Equipment. The Contractor shall remove all salvageable materials and equipment in a manner that will cause the least possible damage thereto. Removed items which are to be retained by the Owner shall be carefully handled, stored, and protected.

The Contractor shall provide identification tags on all items boxed or placed in containers, indicating the
type, size, and quantity of materials.

DEMOLITION

105-3.1 Demolition Operations. Demolition operations shall be conducted to ensure the safe passage of persons to and from facilities occupied and used by the Owner and to prevent damage by falling debris or other cause to adjacent buildings, structures, and other facilities.

The sequence of operations shall be such that maximum protection from inclement weather will be provided for materials and equipment located in partially dismantled structures.

105-3.2 Maintaining Traffic. Demolition operations and removal of debris to disposal areas shall be conducted to ensure minimum interference with runways, taxiways, aprons, roads, streets, walks, and other facilities occupied and used by the Owner.

Streets, walks, runways, taxiways and other facilities occupied and used by the Owner shall not be closed or obstructed without written permission from the Owner.

105-3.3 Reference Standards Requirements. Demolition operations shall be conducted to ensure the safety of persons in accordance with ANSI A 10.6 Safety Requirements for Demolition.

Demolition shall be conducted in accordance with OSHA, state and local requirements.

DISPOSAL OF DEMOLISHED MATERIALS

105-4.1 General. The Contractor shall dispose of debris, rubbish, scrap, and other non-salvageable materials resulting from demolition operations. Demolished materials shall not be stored or disposed of on airport property.

105-4.2 Disposal of Debris. Materials classified as debris shall be transported from Owner property and legally disposed of at no additional cost to the Owner. Permits and fees for disposal shall be paid by the Contractor.

MODIFICATION WORK

105-5.1 General. Cutting, patching, repairing, and other modifications work shall be done by tradesman skilled in the particular trade or work required.

Where required to patch or extend existing construction, or both, such modifications shall match existing exposed surface materials in finish, color, texture, and pattern.

Salvaged items for reuse shall be as approved by the Engineer and Owner.

METHOD OF MEASUREMENT

105-6.1 Temporary airport lighting systems will be measured for payment on a lump sum basis. Work for this item shall include temporary equipment, cables, conduit, and connections required to keep the airfield lighting systems operational during construction. This item shall also include the removal of the items when no longer needed and restoration to original conditions.

105-6.2 Measurement for removal or demolition of airfield lights, guidance signs, reflectors, handholes.
and junction cans will be per each for the quantity removed or demolished. Measurement for this item will also include the removal of the light base, foundation and site restoration.

**Basis of Payment**

105-7.1 Payment will be made at the contract lump sum price for Temporary Airport Lighting Systems. This price shall be full compensation for temporary jumpers, connections, conduit, and for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with the provisions and intent of the plans and specifications.

105-7.2 Payment will be made at the contract unit price for each airfield light, reflector, guidance sign, handhole or junction can removed or demolished. This price shall be full compensation for the disconnection from the electrical system, removing and disposing of all materials, site restoration, and for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with the provisions and intent of the plans and specifications. This payment shall also include the transportation of salvaged materials to the Owner’s designated location.

Payment will be made under:

- Item L-105-7.1 Temporary Airfield Lighting - per lump sum
- Item L-105-7.2 Removal of Guidance Sign and Foundation - per each
- Item L-105-7.3 Removal of Elevated Taxiway Edge Light and Base - per each
- Item L-105-7.4 Removal of Elevated Taxiway Edge Light, Base to Remain – per each
- Item L-105-7.5 Removal of In-Pavement Runway Edge Light, Base to Remain - per each
- Item L-105-7.6 Removal of In-Pavement Runway Edge Light and Base - per each
- Item L-105-7.7 Removal of Base Can with Retroreflective Marker Fastened to Cover Plate - per each
- Item L-105-7.8 Removal of Retroreflective Taxiway Edge Marker - per each
- Item L-105-7.9 Removal of Surface Mounted Taxiway Centerline Retroreflective Marker - per each
- Item L-105-7.10 Removal of Base Can - per each
- Item L-105-7.11 Removal of Electrical Handhole - per each

**End of Item L-105**
ITEM L-108 UNDERGROUND POWER CABLE FOR AIRPORTS

DESCRIPTION

108-1.1 This item shall consist of furnishing and installing power cables that are direct buried and furnishing and/or installing power cables within conduit or duct banks per these specifications at the locations shown on the plans. It includes excavation and backfill of trench for direct-buried cables only. Also included are the installation of counterpoise wires, ground wires, ground rods and connections, cable splicing, cable marking, cable testing, and all incidentals necessary to place the cable in operating condition as a completed unit to the satisfaction of the RPR. This item shall not include the installation of duct banks or conduit, trenching and backfilling for duct banks or conduit, or furnishing or installation of cable for FAA owned/operated facilities.

EQUIPMENT AND MATERIALS

108-2.1 General.

a. Airport lighting equipment and materials covered by advisory circulars (AC) shall be approved under the Airport Lighting Equipment Certification Program per AC 150/5345-53, current version.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer’s certification of compliance with the applicable specification, when requested by the RPR.

c. Manufacturer’s certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor’s cost.

d. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

e. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be electronically submitted in pdf format. The RPR reserves the right to reject any and all equipment, materials, or procedures that do not meet the system design and the standards and codes, specified in this document.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner. The Contractor shall maintain a minimum insulation resistance in accordance with paragraph 108-3.10e with isolation transformers connected in new circuits and new segments of existing circuits through the end of the contract warranty period when tested in accordance with AC 150/5340-26, Maintenance Airport Visual Aid Facilities, paragraph 5.1.3.1, Insulation Resistance Test.

108-2.2 Cable. Underground cable for airfield lighting facilities (runway and taxiway lights and signs) shall conform to the requirements of AC 150/5345-7, Specification for L-824 Underground Electrical Cable for
Airport Lighting Circuits latest edition. Conductors for use on 6.6 ampere primary airfield lighting series circuits shall be single conductor, seven strand, #8 American wire gauge (AWG), L-824 Type C 5,000 volts, non-shielded, with cross-linked polyethylene insulation. Conductors for use on 20 ampere primary airfield lighting series circuits shall be single conductor, seven strand, #6 AWG, L-824 Type C, 5,000 volts, non-shielded, with cross-linked polyethylene insulation. L-824 conductors for use on the L-830 secondary of airfield lighting series circuits shall be sized in accordance with the manufacturer’s recommendations. All other conductors shall comply with FAA and National Electric Code (NEC) requirements. Conductor sizes noted above shall not apply to leads furnished by manufacturers on airfield lighting transformers and fixtures.

Wire for electrical circuits up to 600 volts shall comply with Specification L-824 and/or Commercial Item Description A-A-59544A and shall be type THWN-2, 75°C for installation in conduit and RHW-2, 75°C for direct burial installations. Conductors for parallel (voltage) circuits shall be type and size and installed in accordance with NFPA-70, National Electrical Code.

Unless noted otherwise, all 600-volt and less non-airfield lighting conductor sizes are based on a 75°C, THWN-2, 600-volt insulation, copper conductors, not more than three single insulated conductors, in raceway, in free air. The conduit/duct sizes are based on the use of THWN-2, 600-volt insulated conductors. The Contractor shall make the necessary increase in conduit/duct sizes for other types of wire insulation. In no case shall the conduit/duct size be reduced. The minimum power circuit wire size shall be #12 AWG.

Conductor sizes may have been adjusted due to voltage drop or other engineering considerations. Equipment provided by the Contractor shall be capable of accepting the quantity and sizes of conductors shown in the Contract Documents. All conductors, pigtailed, cable step-down adapters, cable step-up adapters, terminal blocks and splicing materials necessary to complete the cable termination/splice shall be considered incidental to the respective pay items provided.

Cable type, size, number of conductors, strand and service voltage shall be as specified in the Contract Document.

108-2.3 Bare copper wire (counterpoise, bare copper wire ground and ground rods). Wire for counterpoise or ground installations for airfield lighting systems shall be No. 6 AWG bare solid copper wire for counterpoise and/or No. 6 AWG insulated stranded for grounding bond wire per ASTM B3 and ASTM B8, and shall be bare copper wire per ASTM B33. For voltage powered circuits, the equipment grounding conductor shall comply with NEC Article 250.

Ground rods shall be copper-clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case be less than 10 feet long and 3/4 inch in diameter.

108-2.4 Cable connections. In-line connections or splices of underground primary cables shall be of the type called for on the plans, and shall be one of the types listed below. No separate payment will be made for cable connections.

a. The cast splice. A cast splice, employing a plastic mold and using epoxy resin equivalent to that manufactured by 3M™ Company, “Scotchcast” Kit No. 82-B, or an approved equivalent, used for potting the splice is acceptable.

b. The field-attached plug-in splice. Field attached plug-in splices shall be installed as shown on the plans. The Contractor shall determine the outside diameter of the cable to be spliced and furnish appropriately sized connector kits and/or adapters. Tape or heat shrink tubing with integral sealant shall be in accordance with the manufacturer’s requirements. Primary Connector Kits manufactured by Amerace, “Super Kit”, Integro “Complete Kit”, or approved equal is acceptable.

c. The factory-molded plug-in splice. Specification for L-823 Connectors, Factory-Molded to Individual Conductors, is acceptable.
d. **The taped or heat-shrink splice.** Taped splices employing field-applied rubber, or synthetic rubber tape covered with plastic tape is acceptable. The rubber tape should meet the requirements of ASTM D4388 and the plastic tape should comply with Military Specification MIL-I-24391 or Commercial Item Description A-A-55809. Heat shrinkable tubing shall be heavy-wall, self-sealing tubing rated for the voltage of the wire being spliced and suitable for direct-buried installations. The tubing shall be factory coated with a thermoplastic adhesive-sealant that will adhere to the insulation of the wire being spliced forming a moisture- and dirt-proof seal. Additionally, heat shrinkable tubing for multi-conductor cables, shielded cables, and armored cables shall be factory kits that are designed for the application. Heat shrinkable tubing and tubing kits shall be manufactured by Tyco Electronics/Raychem Corporation, Energy Division, or approved equivalent.

In all the above cases, connections of cable conductors shall be made using crimp connectors using a crimping tool designed to make a complete crimp before the tool can be removed. All L-823/L-824 splices and terminations shall be made per the manufacturer’s recommendations and listings.

All connections of counterpoise, grounding conductors and ground rods shall be made by the exothermic process or approved equivalent, except that a light base ground clamp connector shall be used for attachment to the light base. All exothermic connections shall be made per the manufacturer’s recommendations and listings.

108-2.5 **Splicer qualifications.** Every airfield lighting cable splicer shall be qualified in making airport cable splices and terminations on cables rated at or above 5,000 volts AC. The Contractor shall submit to the RPR proof of the qualifications of each proposed cable splicer for the airport cable type and voltage level to be worked on. Cable splicing/terminating personnel shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.

108-2.6 **Concrete.** Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

108-2.7 **Flowable backfill.** Flowable material used to backfill trenches for power cable trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

108-2.8 **Cable identification tags.** Cable identification tags shall be made from a non-corrosive material with the circuit identification stamped or etched onto the tag. The tags shall be of the type as detailed on the plans.

108-2.9 **Tape.** Electrical tapes shall be Scotch™ Electrical Tapes –Scotch™ 88 (1-1/2 inch wide) and Scotch™ 130C® linerless rubber splicing tape (2-inch wide), as manufactured by the Minnesota Mining and Manufacturing Company (3M™), or an approved equivalent.

108-2.10 **Electrical coating.** Electrical coating shall be Scotchkote™ as manufactured by 3M™, or an approved equivalent.

108-2.11 **Existing circuits.** Whenever the scope of work requires connection to an existing circuit, the existing circuit’s insulation resistance shall be tested, in the presence of the RPR. The test shall be performed per this item and prior to any activity that will affect the respective circuit. The Contractor shall record the results on forms acceptable to the RPR. When the work affecting the circuit is complete, the circuit’s insulation resistance shall be checked again, in the presence of the RPR. The Contractor shall record the results on forms acceptable to the RPR. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs to the existing circuit to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, if necessary, shall be borne by the Contractor. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.
108-2.12 Detectable warning tape. Plastic, detectable, American Public Works Association (APWA) Red (electrical power lines, cables, conduit and lighting cable) with continuous legend tape shall be polyethylene film with a metalized foil core and shall be 3-6 inches wide. Detectable tape is incidental to the respective bid item. Detectable warning tape for communication cables shall be orange. Detectable warning tape color code shall comply with the APWA Uniform Color Code.

CONSTRUCTION METHODS

108-3.1 General. The Contractor shall install the specified cable at the approximate locations indicated on the plans. Unless otherwise shown on the plans, all cable required to cross under pavements expected to carry aircraft loads shall be installed in concrete encased duct banks. Cable shall be run without splices, from fixture to fixture.

Cable connections between lights will be permitted only at the light locations for connecting the underground cable to the primary leads of the individual isolation transformers. The Contractor shall be responsible for providing cable in continuous lengths for home runs or other long cable runs without connections unless otherwise authorized in writing by the RPR or shown on the plans.

In addition to connectors being installed at individual isolation transformers, L-823 cable connectors for maintenance and test points shall be installed at locations shown on the plans. Cable circuit identification markers shall be installed on both sides of the L-823 connectors installed and on both sides of slack loops where a future connector would be installed.

Provide not less than 3 feet of cable slack on each side of all connections, isolation transformers, light units, and at points where cable is connected to field equipment. Where provisions must be made for testing or for future above grade connections, provide enough slack to allow the cable to be extended at least one foot vertically above the top of the access structure. This requirement also applies where primary cable passes through empty light bases, junction boxes, and access structures to allow for future connections, or as designated by the RPR.

Primary airfield lighting cables installed shall have cable circuit identification markers attached on both sides of each L-823 connector and on each airport lighting cable entering or leaving cable access points, such as manholes, hand holes, pull boxes, junction boxes, etc. Markers shall be of sufficient length for imprinting the cable circuit identification legend on one line, using letters not less than 1/4 inch in size. The cable circuit identification shall match the circuits noted on the construction plans.

108-3.2 Installation in duct banks or conduits. This item includes the installation of the cable in duct banks or conduit per the following paragraphs. The maximum number and voltage ratings of cables installed in each single duct or conduit, and the current-carrying capacity of each cable shall be per the latest version of the National Electric Code, or the code of the local agency or authority having jurisdiction.

The Contractor shall make no connections or splices of any kind in cables installed in conduits or duct banks.

Unless otherwise designated in the plans, where ducts are in tiers, use the lowest ducts to receive the cable first, with spare ducts left in the upper levels. Check duct routes prior to construction to obtain assurance that the shortest routes are selected and that any potential interference is avoided. Duct banks or conduits shall be installed as a separate item per Item L-110, Airport Underground Electrical Duct Banks and Conduit. The Contractor shall run a mandrel through duct banks or conduit prior to installation of cable to ensure that the duct bank or conduit is open, continuous and clear of debris. The mandrel size shall be compatible with the conduit size. The Contractor shall swab out all conduits/ducts and clean light bases, manholes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed, the light bases and all accessible points of entry to the duct/conduit system shall...
be kept closed except when installing cables. Cleaning of ducts, light bases, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be re-cleaned at the Contractor’s expense. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

The cable shall be installed in a manner that prevents harmful stretching of the conductor, damage to the insulation, or damage to the outer protective covering. The ends of all cables shall be sealed with moisture-seal tape providing moisture-tight mechanical protection with minimum bulk, or alternately, heat shrinkable tubing before pulling into the conduit and it shall be left sealed until connections are made. Where more than one cable is to be installed in a conduit, all cable shall be pulled in the conduit at the same time. The pulling of a cable through duct banks or conduits may be accomplished by hand winch or power winch with the use of cable grips or pulling eyes. Maximum pulling tensions shall not exceed the cable manufacturer’s recommendations. A non-hardening cable-pulling lubricant recommended for the type of cable being installed shall be used where required.

The Contractor shall submit the recommended pulling tension values to the RPR prior to any cable installation. If required by the RPR, pulling tension values for cable pulls shall be monitored by a dynamometer in the presence of the RPR. Cable pull tensions shall be recorded by the Contractor and reviewed by the RPR. Cables exceeding the maximum allowable pulling tension values shall be removed and replaced by the Contractor at the Contractor’s expense.

The manufacturer’s minimum bend radius or NEC requirements (whichever is more restrictive) shall apply. Cable installation, handling and storage shall be per manufacturer’s recommendations. During cold weather, particular attention shall be paid to the manufacturer’s minimum installation temperature. Cable shall not be installed when the temperature is at or below the manufacturer’s minimum installation temperature. At the Contractor’s option, the Contractor may submit a plan, for review by the RPR, for heated storage of the cable and maintenance of an acceptable cable temperature during installation when temperatures are below the manufacturer’s minimum cable installation temperature.

Cable shall not be dragged across base can or manhole edges, pavement or earth. When cable must be coiled, lay cable out on a canvas tarp or use other appropriate means to prevent abrasion to the cable jacket.

108-3.3 Installation of direct-buried cable in trenches. Unless otherwise specified, the Contractor shall not use a cable plow for installing the cable. Cable shall be unreeled uniformly in place alongside or in the trench and shall be carefully placed along the bottom of the trench. The cable shall not be unreeled and pulled into the trench from one end. Slack cable sufficient to provide strain relief shall be placed in the trench in a series of S curves. Sharp bends or kinks in the cable shall not be permitted.

Where cables must cross over each other, a minimum of 3 inches vertical displacement shall be provided with the topmost cable depth at or below the minimum required depth below finished grade.

a. Trenching. Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored. Trenches for cables may be excavated manually or with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of surface is disturbed. Graders shall not be used to excavate the trench with their blades. The bottom surface of trenches shall be essentially smooth and free from coarse aggregate. Unless otherwise specified, cable trenches shall be excavated to a minimum depth of 18 inches below finished grade per NEC Table 300.5, except as follows:

- When off the airport or crossing under a roadway or driveway, the minimum depth shall be 36 inches unless otherwise specified.
- Minimum cable depth when crossing under a railroad track, shall be 42 inches unless otherwise specified.
The Contractor shall excavate all cable trenches to a width not less than 6 inches. Unless otherwise specified on the plans, all cables in the same location and running in the same general direction shall be installed in the same trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches below the required cable depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch sieve. Flowable backfill material may alternatively be used.

Duct bank or conduit markers temporarily removed for trench excavations shall be replaced as required.

It is the Contractor’s responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

1. Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred.

2. Trenching, etc., in cable areas shall then proceed, with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair or replacement.

b. Backfilling. After the cable has been installed, the trench shall be backfilled. The first layer of backfill in the trench shall encompass all cables; be 3 inches deep, loose measurement; and shall be either earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch sieve. This layer shall not be compacted. The second layer shall be 5 inches deep, loose measurement, and shall contain no particles that would be retained on a one inch sieve. The remaining third and subsequent layers of backfill shall not exceed 8 inches of loose measurement and be excavated or imported material and shall not contain stone or aggregate larger than 4 inches maximum diameter.

The second and subsequent layers shall be thoroughly tamped and compacted to at least the density of the adjacent material. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be to a minimum of 100 percent of ASTM D1557.

Trenches shall not contain pools of water during backfilling operations. The trench shall be completely backfilled and tamped level with the adjacent surface, except that when turf is to be established over the trench, the backfilling shall be stopped at an appropriate depth consistent with the type of turfing operation to be accommodated. A proper allowance for settlement shall also be provided. Any excess excavated material shall be removed and disposed of per the plans and specifications.

Underground electrical warning (caution) tape shall be installed in the trench above all direct-buried cable. Contractor shall submit a sample of the proposed warning tape for acceptance by the RPR. If not shown on the plans, the warning tape shall be located 6 inches above the direct-buried cable or the counterpoise wire if present. A 3-6 inch wide polyethylene film detectable tape, with a metalized foil core, shall be installed above all direct buried cable or counterpoise. The tape shall be of the color and have a continuous legend as indicated on the plans. The tape shall be installed 8 inches minimum below finished grade.

c. Restoration. Following restoration of all trenching near airport movement surfaces, the Contractor shall visually inspect the area for foreign object debris (FOD) and remove any that is found. Where soil and sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by work shall be restored to its original condition. The restoration shall include the sodding or seeding as shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. When trenching is through paved areas,
restoration shall be equal to existing conditions. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be to a minimum of 100 percent of ASTM D1557. Restoration shall be considered incidental to the pay item of which it is a component part.

108-3.4 Cable markers for direct-buried cable. The location of direct buried circuits shall be marked by a concrete slab marker, 2 feet square and 4-6 inch thick, extending approximately one inch above the surface. Each cable run from a line of lights and signs to the equipment vault shall be marked at approximately every 200 feet along the cable run, with an additional marker at each change of direction of cable run. All other direct-buried cable shall be marked in the same manner. Cable markers shall be installed directly above the cable. The Contractor shall impress the word “CABLE” and directional arrows on each cable marking slab. The letters shall be approximately 4 inches (100 mm) high and 3 inches wide, with width of stroke 1/2 inch and 1/4 inch deep. Stencils shall be used for cable marker lettering; no hand lettering shall be permitted.

At the location of each underground cable connection/splice, except at lighting units, or isolation transformers, a concrete marker slab shall be installed to mark the location of the connection/splice. The Contractor shall impress the word “SPLICE” on each slab. The Contractor also shall impress additional circuit identification symbols on each slab as directed by the RPR. All cable markers and splice markers shall be painted international orange. Paint shall be specifically manufactured for uncured exterior concrete. After placement, all cable or splice markers shall be given one coat of high-visibility aviation orange paint as approved by the RPR. Furnishing and installation of cable markers is incidental to the respective cable pay item.

108-3.5 Splicing. Connections of the type shown on the plans shall be made by experienced personnel regularly engaged in this type of work and shall be made as follows:

a. Cast splices. These shall be made by using crimp connectors for jointing conductors. Molds shall be assembled, and the compound shall be mixed and poured per the manufacturer’s instructions and to the satisfaction of the RPR.

b. Field-attached plug-in splices. These shall be assembled per the manufacturer’s instructions. These splices shall be made by plugging directly into mating connectors. The joint where the connectors come together shall be finished by one of the following methods: (1) Wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches on each side of the joint (2) Covered with heat shrinkable tubing with integral sealant extending at least 1-1/2 inches on each side of the joint or (3) On connector kits equipped with water seal flap; roll-over water seal flap to sealing position on mating connector.

c. Factory-molded plug-in splices. These shall be made by plugging directly into mating connectors. The joint where the connectors come together shall be finished by one of the following methods: (1) Wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches on each side of the joint. (2) Covered with heat shrinkable tubing with integral sealant extending at least 1-1/2 inches on each side of the joint. or (3) On connector kits so equipped with water seal flap; roll-over water seal flap to sealing position on mating connector.

d. Taped or heat-shrink splices. A taped splice shall be made in the following manner:

Bring the cables to their final position and cut so that the conductors will butt. Remove insulation and jacket allowing for bare conductor of proper length to fit compression sleeve connector with 1/4 inch of bare conductor on each side of the connector. Prior to splicing, the two ends of the cable insulation shall be penciled using a tool designed specifically for this purpose and for cable size and type. Do not use emery paper on splicing operation since it contains metallic particles. The copper conductors shall be thoroughly cleaned. Join the conductors by inserting them equidistant into the compression connection sleeve. Crimp conductors firmly in place with crimping tool that requires a complete crimp before tool can be removed. Test the crimped connection by pulling on the cable. Scrape the insulation to assure that the
entire surface over which the tape will be applied (plus 3 inches on each end) is clean. After scraping, wipe the entire area with a clean lint-free cloth. Do not use solvents.

Apply high-voltage rubber tape one-half lapped over bare conductor. This tape should be tensioned as recommended by the manufacturer. Voids in the connector area may be eliminated by highly elongating the tape, stretching it just short of its breaking point. The manufacturer's recommendation for stretching tape during splicing shall be followed. Always attempt to exactly half-lap to produce a uniform buildup. Continue buildup to 1-1/2 times cable diameter over the body of the splice with ends tapered a distance of approximately one inch over the original jacket. Cover rubber tape with two layers of vinyl pressure-sensitive tape one-half lapped. Do not use glyptol or lacquer over vinyl tape as they react as solvents to the tape. No further cable covering or splice boxes are required.

Heat shrinkable tubing shall be installed following manufacturer's instructions. Direct flame heating shall not be permitted unless recommended by the manufacturer. Cable surfaces within the limits of the heat-shrink application shall be clean and free of contaminate prior to application.

**e. Assembly.** Surfaces of equipment or conductors being terminated or connected shall be prepared in accordance with industry standard practice and manufacturer's recommendations. All surfaces to be connected shall be thoroughly cleaned to remove all dirt, grease, oxides, nonconductive films, or other foreign material. Paints and other nonconductive films shall be removed to expose base metal. Clean all surfaces at least 1/4 inch beyond all sides of the larger bonded area on all mating surfaces. Use a joint compound suitable for the materials used in the connection. Repair painted/coated surface to original condition after completing the connection.

### 108-3.6 Bare counterpoise wire installation for lightning protection and grounding.

If shown on the plans or included in the job specifications, bare solid #6 AWG copper counterpoise wire shall be installed for lightning protection of the underground cables. The RPR shall select one of two methods of lightning protection for the airfield lighting circuit based upon sound engineering practice and lightning strike density.

**a. Equipotential.** The counterpoise size is as shown on the plans. The equipotential method is applicable to all airfield lighting systems; i.e. runway, taxiway, apron – touchdown zone, centerline, edge, threshold and approach lighting systems. The equipotential method is also successfully applied to provide lightning protection for power, signal and communication systems. The light bases, counterpoise, etc – all components - are bonded together and bonded to the vault power system ground loop/electrode.

Counterpoise wire shall be installed in the same trench for the entire length of buried cable, conduits and duct banks that are installed to contain airfield cables. The counterpoise is centered over the cable/conduit/duct to be protected.

The counterpoise conductor shall be installed no less than 8 inches minimum or 12 inches maximum above the raceway or cable to be protected, except as permitted below:

1. The minimum counterpoise conductor height above the raceway or cable to be protected shall be permitted to be adjusted subject to coordination with the airfield lighting and pavement designs.

2. The counterpoise conductor height above the protected raceway(s) or cable(s) shall be calculated to ensure that the raceway or cable is within a 45-degree area of protection, (45 degrees on each side of vertical creating a 90 degree angle).

The counterpoise conductor shall be bonded to each metallic light base, mounting stake, and metallic airfield lighting component.

All metallic airfield lighting components in the field circuit on the output side of the constant current regulator (CCR) or other power source shall be bonded to the airfield lighting counterpoise system.
All components rise and fall at the same potential; with no potential difference, no damaging arcing and no damaging current flow.

See AC 150/5340-30, Design and Installation Details for Airport Visual Aids and NFPA 780, Standard for the Installation of Lightning Protection Systems, Chapter 11, for a detailed description of the Equipotential Method of lightning protection.


b. Isolation Not Required.

c. Common Installation requirements. When a metallic light base is used, the grounding electrode shall be bonded to the metallic light base or mounting stake with a No. 6 AWG bare, annealed or soft drawn, solid copper conductor.

When a nonmetallic light base is used, the grounding electrode shall be bonded to the metallic light fixture or metallic base plate with a No. 6 AWG bare, annealed or soft drawn, solid copper conductor.

Grounding electrodes may be rods, ground dissipation plates, radials, or other electrodes listed in the NFPA 70 (NEC) or NFPA 780.

Where raceway is installed by the directional bore, jack and bore, or other drilling method, the counterpoise conductor shall be permitted to be installed concurrently with the directional bore, jack and bore, or other drilling method raceway, external to the raceway or sleeve.

The counterpoise wire shall also be exothermically welded to ground rods installed as shown on the plans but not more than 500 feet apart around the entire circuit. The counterpoise system shall be continuous and terminate at the transformer vault or at the power source. It shall be securely attached to the vault or equipment external ground ring or other made electrode-grounding system. The connections shall be made as shown on the plans and in the specifications.

Where an existing airfield lighting system is being extended or modified, the new counterpoise conductors shall be interconnected to existing counterpoise conductors at each intersection of the new and existing airfield lighting counterpoise systems.

d. Parallel Voltage Systems. Provide grounding and bonding in accordance with NFPA 70, National Electrical Code.

108-3.7 Counterpoise installation above multiple conduits and duct banks. Counterpoise wires shall be installed above multiple conduits/duct banks for airfield lighting cables, with the intent being to provide a complete area of protection over the airfield lighting cables. When multiple conduits and/or duct banks for airfield cable are installed in the same trench, the number and location of counterpoise wires above the conduits shall be adequate to provide a complete area of protection measured 45 degrees each side of vertical.

Where duct banks pass under pavement to be constructed in the project, the counterpoise shall be placed above the duct bank. Reference details on the construction plans.

108-3.8 Counterpoise installation at existing duct banks. When airfield lighting cables are indicated on the plans to be routed through existing duct banks, the new counterpoise wiring shall be terminated at ground rods at each end of the existing duct bank where the cables being protected enter and exit the duct bank. The new counterpoise conductor shall be bonded to the existing counterpoise system.

108-3.9 Exothermic bonding. Bonding of counterpoise wire shall be by the exothermic welding process or equivalent method accepted by the RPR. Only personnel experienced in and regularly engaged in this type of work shall make these connections.
Contractor shall demonstrate to the satisfaction of the RPR, the welding kits, materials and procedures to be used for welded connections prior to any installations in the field. The installations shall comply with the manufacturer’s recommendations and the following:

a. All slag shall be removed from welds.

b. Using an exothermic weld to bond the counterpoise to a lug on a galvanized light base is not recommended unless the base has been specially modified. Consult the manufacturer’s installation directions for proper methods of bonding copper wire to the light base. See AC 150/5340-30 for galvanized light base exception.

c. If called for in the plans, all buried copper and weld material at weld connections shall be thoroughly coated with 6 mm of 3M Scotchkote® material to prevent surface exposure to corrosive soil or moisture.

108-3.10 Testing. The Contractor shall furnish all necessary equipment and appliances for testing the airport electrical systems and underground cable circuits before and after installation. The Contractor shall perform all tests in the presence of the RPR. The Contractor shall demonstrate the electrical characteristics to the satisfaction of the RPR. All costs for testing are incidental to the respective item being tested. For phased projects, the tests must be completed by phase. The Contractor must maintain the test results throughout the entire project as well as during the warranty period that meet the following:

a. Earth resistance testing methods shall be submitted to the RPR for approval. Earth resistance testing results shall be recorded on an approved form and testing shall be performed in the presence of the RPR. All such testing shall be at the sole expense of the Contractor.

b. Should the counterpoise or ground grid conductors be damaged or suspected of being damaged by construction activities the Contractor shall test the conductors for continuity with a low resistance ohmmeter. The conductors shall be isolated such that no parallel path exists and tested for continuity. The RPR shall approve of the test method selected. All such testing shall be at the sole expense of the Contractor.

After installation, the Contractor shall test and demonstrate to the satisfaction of the RPR the following:

c. That all affected lighting power and control circuits (existing and new) are continuous and free from short circuits.

d. That all affected circuits (existing and new) are free from unspecified grounds.

e. That the insulation resistance to ground of all new non-grounded high voltage series circuits or cable segments is not less than 1000 megohms. Verify continuity of all series airfield lighting circuits prior to energization.

f. That the insulation resistance to ground of all new non-grounded conductors of new multiple circuits or circuit segments is not less than 100 megohms.

g. That all affected circuits (existing and new) are properly connected per applicable wiring diagrams.

h. That all affected circuits (existing and new) are operable. Tests shall be conducted that include operating each control not less than 10 times and the continuous operation of each lighting and power circuit for not less than 1/2 hour.

i. That the impedance to ground of each ground rod does not exceed 25 ohms prior to establishing connections to other ground electrodes. The fall-of-potential ground impedance test shall be used, as described by American National Standards Institute/Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81, to verify this requirement. As an alternate, clamp-on style ground impedance test meters may be used to satisfy the impedance testing requirement. Test equipment and its calibration sheets shall be submitted for review and approval by the RPR prior to performing the testing.
Two copies of tabulated results of all cable tests performed shall be supplied by the Contractor to the RPR. Where connecting new cable to existing cable, insulation resistance tests shall be performed on the new cable prior to connection to the existing circuit.

There are no approved “repair” procedures for items that have failed testing other than complete replacement.

**METHOD OF MEASUREMENT**

108-4.1 The cost of all excavation, backfill, dewatering and restoration regardless of the type of material encountered shall be included in the unit price bid for the work.

108-4.2 Cable or counterpoise wire installed in trench, duct bank or conduit shall be measured by the number of linear feet installed and grounding connectors, and trench marking tape ready for operation, and accepted as satisfactory. Separate measurement shall be made for each cable or counterpoise wire installed in trench, duct bank or conduit. The measurement for this item shall include additional quantities required for slack.

108-4.3 No separate payment will be made for ground rods.

**BASIS OF PAYMENT**

108-5.1 Payment will be made at the contract unit price for trenching, cable and bare counterpoise wire installed in trench (direct-buried), or cable and equipment ground installed in duct bank or conduit, in place by the Contractor and accepted by the RPR. This price shall be full compensation for furnishing all materials and for all preparation and installation of these materials, and for all labor, equipment, tools, and incidentals, including ground rods and ground connectors and trench marking tape, necessary to complete this item.

Payment will be made under:

- **Item L-108-5.1** No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit - per linear foot

- **Item L-108-5.2** No. 6 AWG, Solid, Bare Copper Counterpoise Wire, Installed in Trench, Above the Duct Bank or Conduit, Including Connections/Terminations - per linear foot

**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

- AC 150/5340-26 Maintenance of Airport Visual Aid Facilities
- AC 150/5340-30 Design and Installation Details for Airport Visual Aids
- AC 150/5345-7 Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
- AC 150/5345-26 Specification for L-823 Plug and Receptacle, Cable Connectors
- AC 150/5345-53 Airport Lighting Equipment Certification Program
Commercial Item Description

A-A-59544A  Cable and Wire, Electrical (Power, Fixed Installation)
A-A-55809  Insulation Tape, Electrical, Pressure-Sensitive Adhesive, Plastic

ASTM International (ASTM)

ASTM B3  Standard Specification for Soft or Annealed Copper Wire
ASTM B8  Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft
ASTM B33  Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes
ASTM D4388  Standard Specification for Nonmetallic Semi- Conducting and Electrically Insulating Rubber Tapes

Mil Spec

MIL-PRF-23586F  Performance Specification: Sealing Compound (with Accelerator), Silicone Rubber, Electrical
MIL-I-24391  Insulation Tape, Electrical, Plastic, Pressure Sensitive

National Fire Protection Association (NFPA)

NFPA-70  National Electrical Code (NEC)
NFPA-780  Standard for the Installation of Lightning Protection Systems

American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE)


Federal Aviation Administration Standard

FAA STD-019E  Lightning and Surge Protection, Grounding Bonding and Shielding Requirements for Facilities and Electronic Equipment

END OF ITEM L-108
ITEM L-109 AIRPORT TRANSFORMER VAULT AND VAULT EQUIPMENT

DESCRIPTION

109-1.1 This item shall consist of removing an existing airport transformer vault and equipment and constructing an airport transformer vault or a prefabricated metal housing per these specifications and per the design and dimensions shown in the plans. This work shall also include the installation of conduits in the floor and foundation, painting and lighting of the vault or metal housing, and the furnishing of all incidentals that are necessary to produce a completed unit. Included as a separate part under this item or as a separate item where an existing vault is to be used shall be the furnishing of all vault equipment, wiring, electrical buses, cable, conduit, potheads, and grounding systems. This work shall also include the painting of equipment and conduit; the marking and labeling of equipment and the labeling or tagging of wires; the testing of the installation; and the furnishing of all incidentals necessary to place it in operating condition as a completed unit to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

109-2.1 General.

a. Airport lighting equipment and materials covered by advisory circulars (AC) shall be certified in AC 150/5345-53, Airport Lighting Equipment Certification Program (ALECP) and listed in the ALECP Addendum.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer’s certification of compliance with the applicable specification when requested by the RPR.

c. Manufacturer’s certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor’s cost.

d. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

e. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be provided in electronic pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner.
CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING

109-3.1 Electrical vault building. Not used.

109-3.2 Concrete. Not used.

109-3.3 Precast concrete structures. Not used.

109-3.4 Reinforcing steel. Not used.

109-3.5 Brick. Not used.

109-3.6 Rigid steel conduit. Rigid steel conduit and fittings shall be per Underwriters Laboratories Standards 6 and 514B.

109-3.7 Plastic Conduit and fittings. Plastic Conduit and fittings shall conform to the requirements of UL-651 and UL-654 schedule 40 polyvinyl chloride (PVC) suitable for use above or below ground.

109-3.8 Lighting. Not used.

109-3.9 Outlets. Not used.

109-3.10 Switches. Not used.

109-3.11 Paint.
   a. Priming paint for non-galvanized metal surfaces shall be a high solids alkyd primer compatible with the manufacturer’s recommendations for the intermediate or topcoat.
   b. White paint for body and finish coats on metal and wood surfaces shall be ready-mixed paint conforming to the Master Painter’s Institute (MPI), Reference #9, Exterior Alkyd, Gloss.
   c. Priming paint for wood surfaces shall be mixed on the job by thinning the specified white paint by adding 1/2 pint of raw linseed oil to each gallon.
   d. Paint for the floor, ceiling, and inside walls shall be per Porter Paint Company 69, 71, and 79 or equivalent. Walls and ceiling shall be light gray and the floor shall be medium gray.
   e. The roof coating shall be hot asphalt material per ASTM D2823. Asbestos-free roof coating per ASTM D4479 may be substituted if required by local codes.

109-3.12 Ground bus. Not used.

109-3.13 Square duct. Not used.


109-3.15 Vault prefabricated metal housing. Not used.

109-3.16 FAA-approved equipment. Certain items of airport lighting equipment installed in vaults are covered by individual ACs listed below:

<table>
<thead>
<tr>
<th>AC Number</th>
<th>Specification</th>
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<tbody>
<tr>
<td>AC 150/5345-3</td>
<td>Specification for L-821, Panels for Remote Control of Airport Lighting</td>
</tr>
<tr>
<td>AC 150/5345-5</td>
<td>Circuit Selector Switch</td>
</tr>
<tr>
<td>AC 150/5345-7</td>
<td>Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits</td>
</tr>
<tr>
<td>AC 150/5345-10</td>
<td>Specification for Constant Current Regulators and Regulator Monitors</td>
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109-3.17 Other electrical equipment. Distribution transformers, oil switches, cutouts, relays, terminal blocks, transfer relays, circuit breakers, and all other regularly used commercial items of electrical equipment not covered by FAA equipment specifications and ACs shall conform to the applicable rulings and standards of the Institute of Electrical and Electronic Engineers (IEEE) or the National Electrical Manufacturers Association (NEMA). When specified, test reports from a testing laboratory indicating that the equipment meets the specifications shall be supplied. In all cases, equipment shall be new and a first-grade product. This equipment shall be supplied in the quantities required for the specific project and shall incorporate the electrical and mechanical characteristics specified in the proposal and plans. Equipment selected and installed by the Contractor shall maintain the interrupting current rating of the existing systems or specified rating whichever is greater.

109-3.18 Wire. Wire (in conduit) rated up to 5,000 volts shall be per AC 150/5345-7, Specification for L-824 Underground Electrical Cables for Airport Lighting Circuits. For ratings up to 600 volts, moisture and heat resistant thermoplastic wire conforming to Commercial Item Description A-A-59544A Type THWN-2 shall be used. The wires shall be of the type, size, number of conductors, and voltage shown in the plans or in the proposal.

a. Control circuits. Unless otherwise indicated on the plans, wire shall be not less than No. 12 American wire gauge (AWG) and shall be insulated for 600 volts. If telephone control cable is specified, No. 19 AWG telephone cable per ANSI/Insulated Cable Engineers Association (ICEA) S-85-625 specifications shall be used.

b. Power circuits.

(1) 600 volts maximum – Wire shall be No. 6 AWG or larger and insulated for at least 600 volts.

(2) 3,000 volts maximum – Wire shall be No. 6 AWG or larger and insulated for at least 3,000 volts.

(3) Over 3,000 volts-Wire shall be No. 6 AWG or larger and insulated for at least the circuit voltage.

109-3.19 Short circuit / coordination / device evaluation / arc flash analysis. The Contractor shall, based upon the equipment provided, include as a part of the submittal process the electrical system “Short Circuit / Coordination / Device evaluation / Arc Flash Analysis”. The analysis shall be performed by the equipment manufacturer and submitted in a written report. The analysis shall be signed and sealed by a registered professional Engineer from the state in which the project is located. The analysis shall comply with NFPA-70E and IEEE 1584.

The analysis will include: one line diagrams, short circuit analysis, coordination analysis, equipment evaluation, arc flash analysis and arc flash labels containing at a minimum, equipment name, voltage/current rating, available incident energy and flash protection boundary.

The selected firms field service Engineer shall perform data gathering for analysis completion and device settings, perform device setting as recommended by the analysis and will furnish and install the arc flash labels. The components worst case incident energy will be considered the available arc flash energy at that specific point in the system. Submit three written copies and one electronic copy of the report.
CONSTRUCTION METHODS

CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING

109-4.1 General. Not used.
109-4.2 Foundation and walls.
   c. Concrete masonry construction. Not used.
109-4.3 Roof. Not used.
109-4.4 Floor. Not used.
109-4.5 Floor drain. Not used.
109-4.6 Conduits in floor and foundation. Not used.
109-4.7 Doors. Not used.
109-4.8 Painting. Not used.
109-4.9 Lights and switches. Not used.

INSTALLATION OF EQUIPMENT IN VAULT OR PREFABRICATED METAL HOUSING

109-5.1 General. The Contractor shall furnish, install, and connect all equipment, equipment accessories, conduit, cables, wires, buses, grounds, and support necessary to ensure a complete and operable electrical distribution center for the airport lighting system as specified herein and shown in the plans. When specified, an emergency power supply and transfer switch shall be provided and installed. The equipment installation and mounting shall comply with the requirements of the National Electrical Code and local code agency having jurisdiction. All electrical work shall comply with the NEC and local code agency having jurisdiction including the separation of under 600V work from 5,000V work.

109-5.2 Power supply equipment. Transformers, regulators, booster transformers, and other power supply equipment items shall be furnished and installed at the location shown in the plans or as directed by the RPR. The power supply equipment shall be set on steel "H" sections, "I" beams, channels, or concrete blocks to provide a minimum space of 1-1/2 inch between the equipment and the floor. The equipment shall be placed so as not to obstruct the oil-sampling plugs of the oil-filled units; and nameplates shall, so far as possible, not be obscured.

If specified in the plans and specifications, equipment for an alternate power source or an emergency power generator shall be furnished and installed. The alternate power supply installation shall include all equipment, accessories, an automatic changeover switch, and all necessary wiring and connections. The emergency power generator set shall be the size and type specified.

109-5.3 Switchgear and panels. Oil switches, fused cutouts, relays, transfer switches, panels, panel boards, and other similar items shall be furnished and installed at the location shown in the plans or as directed by the RPR. Wall or ceiling mounted items shall be attached to the wall or ceiling with galvanized bolts of not less than 3/8-inch diameter engaging metal expansion shields or anchors in masonry or concrete vaults.
109-5.4 Duct and conduit. The Contractor shall furnish and install square-type exposed metallic ducts with hinged covers for the control circuits in the vault. These shall be mounted along the walls behind all floor-mounted equipment and immediately below all wall-mounted equipment. The hinged covers shall be placed to open from the front side with the hinges at the front bottom.

Wall brackets for square ducts shall be installed at all joints 2 feet or more apart with intermediate brackets as specified. Conduit shall be used between square ducts and equipment or between different items of equipment when the equipment is designed for conduit connection. When the equipment is not designed for conduit connection, conductors shall enter the square-type control duct through insulating bushings in the duct or on the conduit risers.

109-5.5 Wiring and connections. The Contractor shall make all necessary electrical connections in the vault per the wiring diagrams furnished and as directed by the RPR. In wiring to the terminal blocks, the Contractor shall leave sufficient extra length on each control lead to make future changes in connections at the terminal block. This shall be accomplished by running each control lead the longest way around the box to the proper terminal. Leads shall be neatly laced in place.

109-5.6 Marking and labeling. All equipment, control wires, terminal blocks, etc., shall be tagged, marked, or labeled as specified below:

  a. Wire identification. The Contractor shall furnish and install self-sticking wire labels or identifying tags on all control wires at the point where they connect to the control equipment or to the terminal blocks. Wire labels, if used, shall be of the self-sticking preprinted type and of the manufacturer’s recommended size for the wire involved. Identification -markings designated in the plans shall be followed. Tags, if used, shall be of fiber not less than 3/4 inch in diameter and not less than 1/32 inch thick. Identification markings designated in the plans shall be stamped on tags by means of small tool dies. Each tag shall be securely tied to the proper wire by a nonmetallic cord.

  b. Labels. The Contractor shall stencil identifying labels on the cases of regulators, breakers, and distribution and control relay cases with white oil paint as designated by the RPR. The letters and numerals shall be not less than one inch in height and shall be of proportionate width. The Contractor shall also mark the correct circuit designations per the wiring diagram on the terminal marking strips, which are a part of each terminal block.

METHOD OF MEASUREMENT

109-6.1 Not used.

109-6.2 Not used.

109-6.3 The quantity of equipment to be paid for under this item shall consist of all equipment installed, connected and accepted as a complete unit ready for operation within an existing vault or prefabricated metal housing.

BASIS OF PAYMENT

109-7.1 Payment will be made at the contract unit price for each completed and accepted vault or prefabricated metal housing equipment installation. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item. The removal of the existing regulator shall also be included as part of this item.
Payment will be made under:

Item L-109-7.1  Installation of Equipment Within Existing Vault – per lump sum
Item L-109-7.2  Installation of ACE 3 ALCMS/CCR Interface Unit Including Graphic Update – per lump sum
REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-30 Design and Installation Details for Airport Visual Aids
AC 150/5345-3 Specification for L-821, Panels for Remote Control of Airport Lighting
AC 150/5345-5 Circuit Selector Switch
AC 150/5345-7 Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-10 Specification for Constant Current Regulators and Regulator Monitors
AC 150/5345-13 Specification for L-841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport Lighting Circuits
AC 150/5345-49 Specification L-854, Radio Control Equipment;
AC 150/5345-53 Airport Lighting Equipment Certification Program

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSI/ICEA S-85-625 Standard for Telecommunications Cable Aircore, Polyolefin Insulated, Copper Conductor Technical Requirements

ASTM International (ASTM)

ASTM A615 Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM C62 Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
ASTM C90 Standard Specification for Loadbearing Concrete Masonry Units
ASTM D2823 Standard Specification for Asphalt Roof Coatings, Asbestos Containing
ASTM D4479 Standard Specification for Asphalt Roof Coatings – Asbestos-Free

Commercial Item Description (CID)

A-A 59544 Cable and Wire, Electrical (Power, Fixed Installation)
Institute of Electrical and Electronic Engineers (IEEE)
IEEE 1584 Guide for Performing Arc-Flash Hazard Calculations
Master Painter’s Institute (MPI)

MPI Reference #9 Alkyd, Exterior, Gloss (MPI Gloss Level 6)

Underwriters Laboratories (UL)

UL Standard 6 Electrical Rigid Metal Conduit – Steel
UL Standard 514B Conduit, Tubing, and Cable Fittings
UL Standard 514C Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 651 Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
UL Standard 651A Type EB and A Rigid PVC Conduit and HDPE Conduit

National Fire Protection Association (NFPA)

NFPA-70 National Electrical Code (NEC)
NFPA-70E Standard for Electrical Safety in the Workplace
NFPA-780 Standard for the Installation of Lightning Protection Systems

END OF ITEM L-109
ITEM L-110 AIRPORT UNDERGROUND ELECTRICAL DUCT BANKS AND CONDUITS

DESCRIPTION

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits and removal of existing duct banks. It shall also include all turfing trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

EQUIPMENT AND MATERIALS

110-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer’s certification of compliance with the applicable specification when requested by the RPR.

b. Manufacturer’s certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, that comply with these specifications, at the Contractor’s cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner.

110-2.2 Steel conduit. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be painted with a 10-mil thick coat of asphaltum sealer or shall have a factory-bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10
mils of asphaltum sealer. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer’s written instructions. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth.

**110-2.3 Plastic conduit.** Plastic conduit and fittings—shall conform to the following requirements:

- UL 514B covers W-C-1094- Conduit fittings all types, classes 1 thru 3 and 6 thru 10.
- UL 514C covers W-C-1094- all types, Class 5 junction box and cover in plastic (PVC).
- UL 651 covers W-C-1094-Rigid PVC Conduit, types I and II, Class 4.
- UL 651A covers W-C-1094-Rigid PVC Conduit and high-density polyethylene (HDPE) Conduit type III and Class 4.

Underwriters Laboratories Standards UL-651 and Article 352 of the current National Electrical Code shall be one of the following, as shown on the plans:

- **a.** Type I – Schedule 40 and Schedule 80 PVC suitable for underground use either direct-buried or encased in concrete.
- **b.** Type II – Schedule 40 PVC suitable for either above ground or underground use.
- **c.** Type III – Schedule 80 PVC suitable for either above ground or underground use either direct-buried or encased in concrete.
- **d.** Type III – HDPE pipe, minimum standard dimensional ratio (SDR) 11, suitable for placement with directional boring under pavement.

The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.

**110-2.4 Split conduit.** Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

**110-2.5 Conduit spacers.** Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high grade, high density polyethylene complete with interlocking cap and base pads. They shall be designed to accept No. 4 reinforcing bars installed vertically.

**110-2.6 Concrete.** Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

**110-2.7 Precast concrete structures.** Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program. Precast concrete structures shall conform to ASTM C478.

**110-2.8 Flowable backfill.** Flowable material used to back fill conduit and duct bank trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

**110-2.9 Detectable warning tape.** Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches wide. Detectable tape is incidental to the respective bid item.

**CONSTRUCTION METHODS**

**110-3.1 General.** The Contractor shall install underground duct banks and conduits at the approximate locations indicated on the plans. The RPR shall indicate specific locations as the work progresses, if
required to differ from the plans. Duct banks and conduits shall be of the size, material, and type indicated on the plans or specifications. Where no size is indicated on the plans or in the specifications, conduits shall be not less than 2 inches inside diameter or comply with the National Electrical Code based on cable to be installed, whichever is larger. All duct bank and conduit lines shall be laid so as to grade toward access points and duct or conduit ends for drainage. Unless shown otherwise on the plans, grades shall be at least 3 inches per 100 feet. On runs where it is not practicable to maintain the grade all one way, the duct bank and conduit lines shall be graded from the center in both directions toward access points or conduit ends, with a drain into the storm drainage system. Pockets or traps where moisture may accumulate shall be avoided. Under pavement, the top of the duct bank shall not be less than 18 inches below the subgrade; in other locations, the top of the duct bank or underground conduit shall be not less than 18 inches below finished grade.

The Contractor shall mandrel each individual conduit whether the conduit is direct-buried or part of a duct bank. An iron-shod mandrel, not more than 1/4 inch smaller than the bore of the conduit shall be pulled or pushed through each conduit. The mandrel shall have a leather or rubber gasket slightly larger than the conduit hole.

The Contractor shall swab out all conduits/ducts and clean base can, manhole, pull boxes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed the light bases, manholes, pull boxes, etc., and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be recleaned at the Contractor’s expense. All accessible points shall be kept closed when not installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

For pulling the permanent wiring, each individual conduit, whether the conduit is direct-buried or part of a duct bank, shall be provided with a 200-pound test polypropylene pull rope. The ends shall be secured and sufficient length shall be left in access points to prevent it from slipping back into the conduit. Where spare conduits are installed, as indicated on the plans, the open ends shall be plugged with removable tapered plugs, designed for this purpose.

All conduits shall be securely fastened in place during construction and shall be plugged to prevent contaminants from entering the conduits. Any conduit section having a defective joint shall not be installed. Ducts shall be supported and spaced apart using approved spacers at intervals not to exceed 5 feet.

Unless otherwise shown on the plans, concrete encased duct banks shall be used when crossing under pavements expected to carry aircraft loads, such as runways, taxiways, taxilanes, ramps and aprons. When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.
When rock is encountered, the rock shall be removed to a depth of at least 3 inches below the required conduit or duct bank depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch sieve. Flowable backfill may alternatively be used.

Underground electrical warning (Caution) tape shall be installed in the trench above all underground duct banks and conduits in unpaved areas. Contractor shall submit a sample of the proposed warning tape for approval by the RPR. If not shown on the plans, the warning tape shall be located 6 inches above the duct/conduit or the counterpoise wire if present.

Joints in plastic conduit shall be prepared per the manufacturer’s recommendations for the particular type of conduit. Plastic conduit shall be prepared by application of a plastic cleaner and brushing a plastic solvent on the outside of the conduit ends and on the inside of the couplings. The conduit fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly. Where more than one conduit is placed in a single trench, or in duct banks, joints in the conduit shall be staggered a minimum of 2 feet.

Changes in direction of runs exceeding 10 degrees, either vertical or horizontal, shall be accomplished using manufactured sweep bends.

Whether or not specifically indicated on the drawings, where the soil encountered at established duct bank grade is an unsuitable material, as determined by the RPR, the unsuitable material shall be removed per Item P-152 and replaced with suitable material. Additional duct bank supports shall be installed, as approved by the RPR.

All excavation shall be unclassified and shall be considered incidental to Item L-110. Dewatering necessary for duct installation, and erosion per federal, state, and local requirements is incidental to Item L-110.

Unless otherwise specified, excavated materials that are deemed by the RPR to be unsuitable for use in backfill or embankments shall be removed and disposed of offsite.

Any excess excavation shall be filled with suitable material approved by the RPR and compacted per Item P-152.

It is the Contractor’s responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

a. Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred

b. Trenching, etc., in cable areas shall then proceed with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair.

110-3.2 Duct banks. Unless otherwise shown in the plans, duct banks shall be installed so that the top of the concrete envelope is not less than 18 inches below the bottom of the base or stabilized base course layers where installed under runways, taxiways, aprons, or other paved areas, and not less than 18 inches below finished grade where installed in unpaved areas.
Unless otherwise shown on the plans, duct banks under paved areas shall extend at least 3 feet beyond the edges of the pavement or 3 feet beyond any under drains that may be installed alongside the paved area. Trenches for duct banks shall be opened the complete length before concrete is placed so that if any obstructions are encountered, provisions can be made to avoid them. Unless otherwise shown on the plans, all duct banks shall be placed on a layer of concrete not less than 3 inches thick prior to its initial set. The Contractor shall space the conduits not less than 3 inches apart (measured from outside wall to outside wall). All such multiple conduits shall be placed using conduit spacers applicable to the type of conduit. As the conduit laying progresses, concrete shall be placed around and on top of the conduits not less than 3 inches thick unless otherwise shown on the plans. All conduits shall terminate with female ends for ease of access in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Conduits forming the duct bank shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches to anchor the assembly into the earth prior to placing the concrete encasement. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

When specified, the Contractor shall reinforce the bottom side and top of encasements with steel reinforcing mesh or fabric or other approved metal reinforcement. When directed, the Contractor shall supply additional supports where the ground is soft and boggy, where ducts cross under roadways, or where shown on the plans. Under such conditions, the complete duct structure shall be supported on reinforced concrete footings, piers, or piles located at approximately 5-foot intervals. All pavement surfaces that are to have ducts installed therein shall be neatly saw cut to form a vertical face. All excavation shall be included in the contract with price for the duct.

Install a plastic, detectable, color as noted, 3 to 6 inches wide tape, 8 inches minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inchwide tape only for single conduit runs. Utilize the 6-inch wide tape for multiple conduits and duct banks. For duct banks equal to or greater than 24 inches in width, utilize more than one tape for sufficient coverage and identification of the duct bank as required.

When existing cables are to be placed in split duct, encased in concrete, the cable shall be carefully located and exposed by hand tools. Prior to being placed in duct, the RPR shall be notified so that he may inspect the cable and determine that it is in good condition. Where required, split duct shall be installed as shown on the drawings or as required by the RPR.

110-3.3 Conduits without concrete encasement. Trenches for single-conduit lines shall be not less than 6 inches nor more than 12 inches wide. The trench for 2 or more conduits installed at the same level shall be proportionately wider. Trench bottoms for conduits without concrete encasement shall be made to conform accurately to grade so as to provide uniform support for the conduit along its entire length.

Unless otherwise shown on the plans, a layer of fine earth material, at least 4 inches thick (loose measurement) shall be placed in the bottom of the trench as bedding for the conduit. The bedding material shall consist of soft dirt, sand or other fine fill, and it shall contain no particles that would be retained on a 1/4-inch sieve. The bedding material shall be tamped until firm. Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport’s secured area where trespassing is prohibited are at least 18 inches below the finished grade. Conduits outside the Airport’s secured area shall be installed so that the tops of the conduits are at least 24 inches below the finished grade per National Electric Code (NEC), Table 300.5.
When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

110-3.4 Markers. The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet square and 4 - 6 inches thick extending approximately one inch above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet along the cable or duct run, with an additional marker at each change of direction of cable or duct run. The Contractor shall impress the word “DUCT” or “CONDUIT” on each marker slab. Impression of letters shall be done in a manner, approved by the RPR, for a neat, professional appearance. All letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the RPR. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the RPR. The letters shall be 4 inches high and 3 inches wide with width of stroke 1/2 inch and 1/4 inch deep or as large as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

110-3.5 Backfilling for conduits. For conduits, 8 inches of sand, soft earth, or other fine fill (loose measurement) shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted per Item P-152 except that material used for back fill shall be select material not larger than 4 inches in diameter.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.6 Backfilling for duct banks. After the concrete has cured, the remaining trench shall be backfilled and compacted per Item P-152 “Excavation and Embankment” except that the material used for backfill shall be select material not larger than 4 inches in diameter. In addition to the requirements of Item P-152, where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet of duct bank or one work period’s construction, whichever is less.
Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.7 Restoration. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The restoration shall include sodding or seeding shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. All restoration shall be considered incidental to the respective L-110 pay item. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

110-3.8 Ownership of removed cable. Cable to be removed shall be legally disposed of off airport property.

**METHOD OF MEASUREMENT**

110-4.1 Underground conduits and duct banks shall be measured by the linear feet of conduits and duct banks installed, including encasement, locator tape, trenching and backfill with designated material, and restoration, and for drain lines, the termination at the drainage structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.

**BASIS OF PAYMENT**

110-5.1 Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, and, for drain lines, the termination at the drainage structure. This price shall be full compensation for removal and disposal of existing duct banks and conduits as shown on the plans, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications. Payment will be made under:

- **Item L-110-5.1** Clear Existing Conduit, Remove Existing Cables – per linear foot
- **Item L-110-5.2** Removal of Conduit and Cable – per linear foot
- **Item L-110-5.3** Concrete Encased, 1-Way, 2-Inch PVC Conduit, Schedule 40 – per linear foot
- **Item L-110-5.4** Concrete Encased, 3-Way, 3-Inch PVC Conduit, Schedule 40 – per linear foot
- **Item L-110-5.5** Concrete Encased, 4-Way, 4-Inch PVC Conduit, Schedule 80 – per linear foot
- **Item L-110-5.6** Concrete Encased, 2-Way, 4-Inch PVC Conduit, Schedule 40 – per linear foot
- **Item L-110-5.7** Concrete Encase existing 4-Way, 5-Inch PVC Conduit – per linear foot
- **Item L-110-5.8** Concrete Encase existing 1-Way, 3-Inch PVC Conduit – per linear foot
- **Item L-110-5.9** Removal of Miscellaneous Duct Banks – per linear foot
REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circular (AC)

AC 150/5340-30 Design and Installation Details for Airport Visual Aids
AC 150/5345-53 Airport Lighting Equipment Certification Program

ASTM International (ASTM)

ASTM A615 Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

National Fire Protection Association (NFPA)

NFPA-70 National Electrical Code (NEC)

Underwriters Laboratories (UL)

UL Standard 6 Electrical Rigid Metal Conduit - Steel
UL Standard 514B Conduit, Tubing, and Cable Fittings
UL Standard 514C Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 1242 Electrical Intermediate Metal Conduit Steel
UL Standard 651 Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
UL Standard 651A Type EB and A Rigid PVC Conduit and HDPE Conduit

END OF ITEM L-110
ITEM L-115 ELECTRICAL MANHOLES AND JUNCTION STRUCTURES

DESCRIPTION

115-1.1 This item shall consist of electrical manholes and junction structures (hand holes, pull boxes, junction cans, etc.) installed per this specification, at the indicated locations and conforming to the lines, grades and dimensions shown on the plans or as required by the RPR. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the RPR including removal of existing manholes and junction structures as shown on the plans.

EQUIPMENT AND MATERIALS

115-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer’s certification of compliance with the applicable specification when so requested by the RPR.

b. Manufacturer’s certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor’s cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner.

115-2.2 Concrete structures. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. Cast-in-place concrete structures shall be as shown on the plans.

115-2.3 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program. Provide precast concrete structures where shown on the plans.
Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand 100,000 lb aircraft loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans.

Threaded inserts and pulling eyes shall be cast in as shown on the plans.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the RPR shall be submitted by the Contractor to allow for a full evaluation by the RPR. The RPR shall review per the process defined in the General Provisions.

115-2.4 Junction boxes. Junction boxes shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) airport light bases that are encased in concrete. The light bases shall have a L-894 blank cover, gasket, and stainless steel hardware. All bolts, studs, nuts, lock washers, and other similar fasteners used for the light fixture assemblies must be fabricated from 316L (equivalent to EN 1.4404), 18-8, 410, or 416 stainless steel. If 18-8, 410, or 416 stainless steel is utilized it shall be passivated and be free from any discoloration. Covers shall be 3/8-inch (9-mm) thickness for L-867 and 3/4-inch (19-mm) thickness for L-868. All junction boxes shall be provided with both internal and external ground lugs.

115-2.5 Mortar. The mortar shall be composed of one part of cement and two parts of mortar sand, by volume. The cement shall be per the requirements in ASTM C150, Type I. The sand shall be per the requirements in ASTM C144. Hydrated lime may be added to the mixture of sand and cement in an amount not to exceed 15% of the weight of cement used. The hydrated lime shall meet the requirements of ASTM C206. Water shall be potable, reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

115-2.6 Concrete. All concrete used in structures shall conform to the requirements of Item P-610, Concrete for Miscellaneous Structures.

115-2.7 Frames and covers. The frames shall conform to one of the following requirements:
   a. ASTM A48  Gray iron castings
   b. ASTM A47  Malleable iron castings
   c. ASTM A27  Steel castings
   d. ASTM A283, Grade D  Structural steel for grates and frames
   e. ASTM A536  Ductile iron castings
   f. ASTM A897  Austempered ductile iron castings

All castings specified shall withstand a maximum tire pressure of 200 psi and maximum load of 100,000 lbs.

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word "ELECTRIC" or other approved designation cast on it. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a “DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER” safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

115-2.8 Ladders. Ladders, if specified, shall be galvanized steel or as shown on the plans.
115-2.9 Reinforcing steel. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A615, Grade 60.

115-2.10 Bedding/special backfill. Bedding or special backfill shall be as shown on the plans.

115-2.11 Flowable backfill. Flowable material used to backfill shall conform to the requirements of Item P-153, Controlled Low Strength Material.

115-2.12 Cable trays. Cable trays shall be of plastic. Cable trays shall be located as shown on the plans.


115-2.14 Conduit terminators. Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

115-2.15 Pulling-in irons. Pulling-in irons shall be manufactured with 7/8-inch (22 mm) diameter hot-dipped galvanized steel or stress-relieved carbon steel roping designed for concrete applications (7 strand, 1/2-inch (12 mm) diameter with an ultimate strength of 270,000 psi (1862 MPa)). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

115-2.16 Ground rods. Ground rods shall be one piece, copper clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case shall they be less than 8 feet (2.4 m) long nor less than 5/8 inch (16 mm) in diameter.

CONSTRUCTION METHODS

115-3.1 Unclassified excavation. It is the Contractor’s responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the RPR without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings to the lines and grades or elevations shown on the plans or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to Item L-115. Dewatering necessary for structure installation and erosion per federal, state, and local requirements is incidental to Item L-115.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the RPR. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the RPR. Structures shall be placed after the RPR has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 inches (150 mm) of sand or a material approved by the RPR as a suitable base to receive the structure. The base material shall be compacted.
and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the plans.

115-3.2 Concrete structures. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

115-3.3 Precast unit installations. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 Placement and treatment of castings, frames and fittings. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the RPR and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written approval is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the RPR and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor’s expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 Installation of ladders. Ladders shall be installed such that they may be removed if necessary. Mounting brackets shall be supplied top and bottom and shall be cast in place during fabrication of the structure or drilled and grouted in place after erection of the structure.

115-3.6 Removal of sheeting and bracing. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The RPR may direct the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 Backfilling. After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches (150 mm) in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

Backfill shall not be placed against any structure until approval is given by the RPR. In the case of concrete, such approval shall not be given until tests made by the laboratory under supervision of the RPR establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

Where required, the RPR may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all
damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 Connection of duct banks. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

115-3.9 Grounding. A ground rod shall be installed in the floor of all concrete structures so that the top of rod extends 6 inches (150 mm) above the floor. The ground rod shall be installed within one foot (30 cm) of a corner of the concrete structure. Ground rods shall be installed prior to casting the bottom slab. Where the soil condition does not permit driving the ground rod into the earth without damage to the ground rod, the Contractor shall drill a 4-inch (100 mm) diameter hole into the earth to receive the ground rod. The hole around the ground rod shall be filled throughout its length, below slab, with Portland cement grout. Ground rods shall be installed in precast bottom slab of structures by drilling a hole through bottom slab and installing the ground rod. Bottom slab penetration shall be sealed watertight with Portland cement grout around the ground rod.

A grounding bus of 4/0 bare stranded copper shall be exothermically bonded to the ground rod and loop the concrete structure walls. The ground bus shall be a minimum of one foot (30 cm) above the floor of the structure and separate from other cables. No. 2 American wire gauge (AWG) bare copper pigtails shall bond the grounding bus to all cable trays and other metal hardware within the concrete structure. Connections to the grounding bus shall be exothermic. If an exothermic weld is not possible, connections to the grounding bus shall be made by using connectors approved for direct burial in soil or concrete per UL 467. Hardware connections may be mechanical, using a lug designed for that purpose.

115-3.10 Cleanup and repair. After erection of all galvanized items, damaged areas shall be repaired by applying a liquid cold-galvanizing compound per MIL-P-21035. Surfaces shall be prepared and compound applied per the manufacturer’s recommendations.

Prior to acceptance, the entire structure shall be cleaned of all dirt and debris.

115-3.11 Restoration. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. All sodding, grading and restoration shall be considered incidental to the respective Item L-115 pay item.

The Contractor shall grade around structures as required to provide positive drainage away from the structure.

Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials.

Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.12 Inspection. Prior to final approval, the electrical structures shall be thoroughly inspected for conformance with the plans and this specification. Any indication of defects in materials or workmanship shall be further investigated and corrected. The earth resistance to ground of each ground rod shall not exceed 25 ohms. Each ground rod shall be tested using the fall-of-potential ground impedance test per American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81. This test shall be performed prior to establishing connections to other ground electrodes.

115-3.13 Manhole elevation adjustments. The Contractor shall adjust the tops of existing manholes in areas designated in the Contract Documents to the new elevations shown. The Contractor shall be responsible for determining the exact height adjustment required to raise or lower the top of each
manhole to the new elevations. The existing top elevation of each manhole to be adjusted shall be determined in the field and subtracted/added from the proposed top elevation.

The Contractor shall remove/extend the existing top section or ring and cover on the manhole structure or manhole access. The Contractor shall install precast concrete sections or grade rings of the required dimensions to adjust the manhole top to the new proposed elevation or shall cut the existing manhole walls to shorten the existing structure, as required by final grades. The Contractor shall reinstall the manhole top section or ring and cover on top and check the new top elevation.

The Contractor shall construct a concrete slab around the top of adjusted structures located in graded areas that are not to be paved. The concrete slab shall conform to the dimensions shown on the plans.

**115-3.14 Duct extension to existing ducts.** Where existing concrete encased ducts are to be extended, the duct extension shall be concrete encased plastic conduit. The fittings to connect the ducts together shall be standard manufactured connectors designed and approved for the purpose. The duct extensions shall be installed according to the concrete encased duct detail and as shown on the plans.

**METHOD OF MEASUREMENT**

**115-4.1** Electrical manholes and junction structures shall be measured by each unit completed in place and accepted. The following items shall be included in the price of each unit: All required excavation and dewatering; sheeting and bracing; all required backfilling with on-site materials; restoration of all surfaces and finished grading and turfing; all required connections; temporary cables and connections; and ground rod testing.

**BASIS OF PAYMENT**

**115-5.1** The accepted quantity of electrical manholes and junction structures will be paid for at the Contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

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<th>Item Number</th>
<th>Description</th>
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<td>L-115-5.1</td>
<td>Electrical Handhole, 4’X4’X4’, Aircraft Rated - Per Each</td>
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<tr>
<td>L-115-5.2</td>
<td>FAA Electrical Handhole, 4’X4’X4’, Aircraft Rated - Per Each</td>
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<td>L-115-5.3</td>
<td>L-867B Base Can in New Asphalt Pavement – per each</td>
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<td>L-867B Base Can in Existing Pavement – per each</td>
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<tr>
<td>L-115-5.6</td>
<td>Extension for Existing L-867B Base Can – per each</td>
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**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

Advisory Circular (AC)
   AC 150/5345-7   Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
   AC 150/5345-26  Specification for L-823 Plug and Receptacle, Cable Connectors
   AC 150/5345-42  Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
   AC 150/5340-30  Design and Installation Details for Airport Visual Aids
   AC 150/5345-53  Airport Lighting Equipment Certification Program

Commercial Item Description (CID)
   A-A 59544       Cable and Wire, Electrical (Power, Fixed Installation)

ASTM International (ASTM)
   ASTM A27        Standard Specification for Steel Castings, Carbon, for General Application
   ASTM A47        Standard Specification for Ferritic Malleable Iron Castings
   ASTM A48        Standard Specification for Gray Iron Castings
   ASTM A283       Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
   ASTM A536       Standard Specification for Ductile Iron Castings
   ASTM A615       Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
   ASTM A897       Standard Specification for Austempered Ductile Iron Castings
   ASTM C144       Standard Specification for Aggregate for Masonry Mortar
   ASTM C150       Standard Specification for Portland Cement
   ASTM C206       Standard Specification for Finishing Hydrated Lime

FAA Engineering Brief (EB)
   EB #83         In Pavement Light Fixture Bolts

Mil Spec
   MIL-P-21035    Paint High Zinc Dust Content, Galvanizing Repair

National Fire Protection Association (NFPA)
   NFPA-70        National Electrical Code (NEC)

END OF ITEM L-115
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ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS

DESCRIPTION

125-1.1 This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

125-2 General.

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not perform as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for proper operation.

b. Manufacturer’s certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

c. All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be submitted in electronic PDF format, tabbed by specification section. The RPR reserves the right to reject any or all equipment, materials or procedures, which, in the RPR’s opinion, does not meet the system design and the standards and codes, specified herein.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner.

All LED light fixtures, with the exception of obstruction lighting (AC 150/5345-43) must be warranted by the manufacturer for a minimum of 4 years after date of installation inclusive of all electronics. Obstruction lighting warranty is set by the individual manufacturer.
EQUIPMENT AND MATERIALS

125-2.2 Conduit/Duct. Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.

125-2.3 Cable and Counterpoise. Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.

125-2.4 Tape. Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.

125-2.5 Cable Connections. Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.

125-2.6 Retroreflective Markers. Retroreflective markers shall be type L-853 and shall conform to the requirements of AC 150/5345-39.

125-2.7 Runway and Taxiway Lights. Runway and taxiway lights shall conform to the requirements of AC 150/5345-46. Lamps shall be of size and type indicated, or as required by fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors conforming to the specification for the light concerned or to the standard referenced.

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125-2.8 Runway and Taxiway Signs. Runway and Taxiway Guidance Signs should conform to the requirements of AC 150/5345-44.
Signs

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125-2.9 Runway End Identifier Light (REIL). Not required.

125-2.10 Precision Approach Path Indicator (PAPI). Not required.

125-2.11 Circuit Selector Cabinet. Not used.

125-2.12 Light Base and Transformer Housings. Light Base and Transformer Housings should conform to the requirements of AC 150/5345-42. Light bases shall be Type L-867 and L-868, Class 1A, Size B shall be provided as indicated or as required to accommodate the fixture or device installed thereon. Base plates, cover plates, and adapter plates shall be provided to accommodate various sizes of fixtures.

125-2.13 Isolation Transformers. Isolation Transformers shall be Type L-830, size as required for each installation. Transformer shall conform to AC 150/5345-47.

INSTALLATION

125-3.1 Installation. The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

125-3.2 Testing. All lights shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. The test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The fixtures shall illuminate properly during each portion of the test.

125-3.3 Shipping and Storage. Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer’s recommendations.

125-3.4 Elevated and In-pavement Lights. Water, debris, and other foreign substances shall be removed prior to installing fixture base and light.

A jig or holding device shall be used when installing each light fixture to ensure positioning to the proper elevation, alignment, level control, and azimuth control. Light fixtures shall be oriented with the light
beams parallel to the runway or taxiway centerline and facing in the required direction. The outermost edge of fixture shall be level with the surrounding pavement. Surplus sealant or flexible embedding material shall be removed. The holding device shall remain in place until sealant has reached its initial set.

**METHOD OF MEASUREMENT**

**125-4.1** Reflective markers will be measured by the number installed as completed units in place, ready for operation, and accepted by the RPR. Runway and taxiway lights will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR. Guidance signs will be measured by the number of each type and size installed as completed units, in place, ready for operation, and accepted by the RPR.

**BASIS OF PAYMENT**

**125-5.1** Payment will be made at the Contract unit price for each complete runway or taxiway light, guidance sign or reflective marker installed by the Contractor and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

- **Item L-125-5.1** L-861T(L) Elevated Taxiway Edge Light on New L-867B Light Base in New Pavement – per each
- **Item L-125-5.2** L-861T(L) Elevated Taxiway Edge Light on New 12” L-867B Light Base in New Pavement – per each
- **Item L-125-5.3** L-861T Elevated Taxiway Edge Light on New L-867B Light Base in New Pavement – per each
- **Item L-125-5.4** L-861T Elevated Taxiway Edge Light on Existing L-867B Light Base with Risers – per each
- **Item L-125-5.5** L-862 Elevated Runway Edge Light on Adapter for Existing L-868B Light Base – per each
- **Item L-125-5.6** L-850C In-Pavement Runway Edge Light on New L-868B Light Base – per each
- **Item L-125-5.7** L-853 Elevated Taxiway Edge Retroreflective Marker – per each
- **Item L-125-5.8** L-858(L) Guidance Sign on New Foundation – per each
- **Item L-125-5.9** L-804 Elevated Runway Guard Light, Isolation Transformer and Base Can – per each

**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

- **AC 150/5340-18** Standards for Airport Sign Systems
- **AC 150/5340-26** Maintenance of Airport Visual Aid Facilities
<table>
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<tr>
<th>AC 150/5340-30</th>
<th>Design and Installation Details for Airport Visual Aids</th>
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<tr>
<td>AC 150/5345-5</td>
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<td>Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits</td>
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<td>Specification for L-823 Plug and Receptacle, Cable Connectors</td>
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<td>Precision Approach Path Indicator (PAPI) Systems</td>
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<td>AC 150/5345-39</td>
<td>Specification for L-853, Runway and Taxiway Retroreflective Markers</td>
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<td>Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories</td>
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<td>Specification for Runway and Taxiway Light Fixtures</td>
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<td>Specification for Series to Series Isolation Transformers for Airport Lighting Systems</td>
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<td>Specification for Discharge-Type Flashing Light Equipment</td>
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<td>AC 150/5345-53</td>
<td>Airport Lighting Equipment Certification Program</td>
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**Engineering Brief (EB)**

EB No. 67 Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures

**END OF ITEM L-125**
CONSTRUCTION PLANS FOR IMPROVEMENTS TO:

BOISE AIRPORT

BOISE, IDAHO

SCHEDULE I (FEDERAL) - REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J AND B

SCHEDULE II (NON-FEDERAL) - UPS K-LOADER PADS

FAA PROJECT NUMBER: 3-16-0003-071-2020
BOISE CITY PROJECT NUMBER: 20-207

FEBRUARY 26, 2020
ISSUED FOR BID

RS&H PROJECT NO.: 225-0005-022

*PDF PLANS TO BE PRINTED IN COLOR*
**INDEX OF DRAWINGS**

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**SCHEDULE I - UPS K-LOADER**

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**GENERAL NOTE**

1. This document contains the complete engineering and design drawings and shall be the basis for the preparation of all construction drawings by the construction engineer and all construction documents by the construction consultant.

2. All plans, specifications, and all other documents and drawings shall be used as a basis for the construction of the work described herein and shall be the basis for the approval of the plans and specifications by the owner.

3. The work described herein shall be constructed in accordance with the plans and specifications and all other documents and drawings and shall be completed in accordance with the construction schedule.

4. The plans and specifications and all other documents and drawings shall be the basis for all construction work and shall be used as a basis for the approval of the plans and specifications by the owner.

5. The work shall be performed in accordance with the plans and specifications and all other documents and drawings and shall be completed in accordance with the construction schedule.

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CONTRACTOR SAFETY AND SECURITY REQUIREMENTS

SAFETY
1. A construction safety and security plan shall be developed and distributed to all employees of the contractor, including subcontractors, at the beginning of the project. The plan shall include all the necessary safety and security measures.

2. All employees shall be required to wear personal protective equipment while on the job site. This includes hard hats, gloves, safety glasses, and steel-toed boots.

3. All construction equipment shall be inspected daily for proper operation and safety. Equipment shall be securely anchored and guarded.

4. All construction activities shall be supervised by a qualified individual to ensure compliance with safety and security regulations.

5. All construction activities shall be conducted in a manner that minimizes risk to the public and other construction workers.

SECURITY
1. All construction sites shall be secured and monitored by appropriate security personnel.

2. All construction sites shall be locked when not in use, and all access points shall be monitored.

3. All construction equipment shall be locked when not in use.

4. All construction sites shall be equipped with appropriate security cameras and access control systems.

REVISIONS
NO.
DESCRIPTION
DATE

DATE ISSUED:

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

FEBRUARY 26, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED

FOR BID

SCHEDULE I

SCHEDULE II

CONSTRUCTION AHEAD

TAXIWAY RESTRICTED

TO MAX. 147.1 FOOT WINGSPAN

BARRICADE DELINEATOR DETAIL (CANDLESTICK)

RUNWAY CLOSURE MARKER (LIGHTED CROSS)

WORK HOURS
1. Construction work shall be conducted during daylight hours, according to the schedule.

2. The schedule of construction activities shall be submitted to the appropriate regulatory agency for approval.

3. Construction work shall be conducted in a manner that minimizes disruption to the public.

4. All construction activities shall be terminated during inclement weather or other hazardous conditions.

NOTES:

1. The area around the construction site shall be monitored by appropriately trained security personnel.

2. All construction equipment shall be properly secured and guarded.

3. All construction activities shall be conducted in a manner that minimizes risk to the public and other construction workers.

4. All construction sites shall be equipped with appropriate security cameras and access control systems.

BARRICADE DELINEATOR DETAIL

CONSTRUCTION AHEAD

TAXIWAY RESTRICTED

TO MAX. 147.1 FOOT WINGSPAN

STOP SIGN DETAIL

CONSTRUCTION SAFETY FLAG

STOP

TAXIWAY CLOSURE DETAIL

NOTE:

1. Construction work shall be conducted during daylight hours, according to the schedule.

2. The schedule of construction activities shall be submitted to the appropriate regulatory agency for approval.

3. Construction work shall be conducted in a manner that minimizes disruption to the public.

4. All construction activities shall be terminated during inclement weather or other hazardous conditions.

SCHEDULE (FEDERAL):

REALIGNMENT TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (NON-FEDERAL):

UPS K-LOADER PADS

attachment: FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River;...
REVISIONS

NO. DESCRIPTION DATE

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED FOR BID

1. Project Name and Control Points Located in the Engineer Area (State Plane Co. Remarks)
2. Reference Datum are located in a 1.5 Mile Radius of the Project Site (State Plane Co. Remarks)
3.標記的項目為設計師的設計意圖，以供參考
4. The construction plans shall be used for construction purposes only. All other notes and drawings shall be removed from the drawings and kept for reference. The contractor shall supply the control points to the surveyor for relocation to the original survey points.
5. System heading by Designated designer, Inc. Copy from the system owner in 67 of General Specifications.
6. The engineer reserves the right to change the specifications.

HORIZONTAL & VERTICAL CONTROL POINTS

POLYGON POINT NAME

COOS

SHEET 5 OF 80

ISSUED

ECM AID

Packet Pg. 474
The document is a blueprint of an airport realignment project. It includes a detailed layout of the taxiways and aprons, with various annotations and references to different phases of the project.

The title of the drawing is "REALIGNMENT TAXIWAY H AS MILL/OVERLAY PORTIONS OF TAXIWAYS J & B".

Key points:
1. The project involves realigning Taxiway H and mill/overlay portions of Taxiways J & B.
2. The drawing includes annotations for various phases of the project, with references to calendar dates and project numbers.
3. The blueprint is part of a larger set of drawings and plans for the airport development.

The drawing format includes a legend for symbols, a north arrow, and scale indicators for accurate measurement and orientation.

Overall, the document provides a comprehensive visual representation of the planned changes to the airport's taxiway system.
### REVISIONS

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**DATE ISSUED:** FEBRUARY 26, 2020

**REVIEWED BY:**

**DRAWN BY:**

**DESIGNED BY:**

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**RS&H PROJECT NUMBER**

**SHEET TITLE**

**DRAWING NUMBER**

**ISSUED FOR BID**

**SCHEDULE I**

(FEDERAL):

REALIGNMENT
TAXIWAY H AT MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

**SCHEDULE II**

(NON-FEDERAL):

UPS K-LOADER
PADS

---

**NOTES:**

1. USE SHEET 255 - CSS FOR TYPICAL SECTIONS AND DETAILS.

2. USE SHEET 258 - CSS FOR GENERAL ANNOTATION AND LEGEND.

3. CONSTRUCTION SEQUENCE SHEETS SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO CHANGE.

4. REFER TO DRAWINGS AND CROSS-REFERENCES PROVIDED.

5. FULL DRAWING騎MIFICATION GRAPHIC SHOWING THE ORIGIN OF ALL DETAIL DRAWINGS AND SECTIONS IS PROVIDED IN SHEET 250. ALL DETAIL DRAWINGS ARE TO BE REVIEWED AND APPROVED PRIOR TO ISSUED.

6. THE CONTRACTOR SHALL UTILIZE THE DETAIL SHEETS TO COMPLETE THE DETAIL WORK IN THE FIELD. THE CONTRACTOR SHALL CONFIRM ALL DETAIL DRAWINGS AND SECTIONS WITH THE OFFICE PRIOR TO ISSUED.

---

**DEMOLITION PLAN**

**SHEET 3 OF 80**

**ISSUED**

Packet Pg. 488
REALIGNMENT
TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (FEDERAL):

REALIGNMENT
TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):

UPS K-LOADER PADS

NOTE:
1. Prior to construction, any construction activity shall
   be coordinated with Airport Operations and
   Fire Protection Division.

LEGEND:
- TAXIWAY
- MILL/OVERLAY
- REDLINE

PACKET PG. 491

REVISIONS

DATE

DATE ISSUED:

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

FEBRUARY 26, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED

FOR BID

SCHEDULE I

(FEDERAL):

REALIGNMENT

TAXIWAY H AT

MILL/OVERLAY

PORTIONS OF

TAXIWAYS J & B

SCHEDULE II

(NON-FEDERAL):

UPS K-LOADER

PADS

NOTES:

1. PLEASE PAY ATTENTION TO SHOP DRAWINGS ATTACHED

2. PLEASE PAY ATTENTION TO DESIGN AND ASBARY STANDARDS

3. PLEASE PAY ATTENTION TO FAA, AMERICAN AERONAUTICS & SPACE ADMINISTRATION

4. PLEASE PAY ATTENTION TO DOD, DEPARTMENT OF DEFENSE

5. PLEASE PAY ATTENTION TO US ARMY CORPS OF ENGINEERS

6. PLEASE PAY ATTENTION TO STANDARDS OF OTHER GOVERNMENT AGENCIES

LEGEND:

- Existing Taxiway
- New Alignment Taxiway
- New Adjacent Taxiway
- Existing Alignment Taxiway
- Existing Taxiway Markings
- Existing Alignment Taxiway Markings
- Existing Taxiway Cabinet
- New Alignment Taxiway Cabinet
- Existing Alignment Taxiway Cabinet
- New Alignment Taxiway Markings
- Existing Alignment Taxiway Markings
- Existing Alignment Taxiway Cabinet
- New Alignment Taxiway Cabinet
- Other realign and overlay items
- North - 1" = 30' CARDINAL POINTS

TYP.

- Existing Taxiway
- New Alignment Taxiway
- New Adjacent Taxiway
- Existing Alignment Taxiway
- Existing Taxiway Markings
- Existing Alignment Taxiway Markings
- Existing Taxiway Cabinet
- New Alignment Taxiway Cabinet
- Existing Alignment Taxiway Cabinet
- New Alignment Taxiway Markings
- Existing Alignment Taxiway Markings
- Existing Alignment Taxiway Cabinet
- New Alignment Taxiway Cabinet
- Other realign and overlay items
- North - 1" = 30' CARDINAL POINTS

TYP.

- Proposed Overlay
- Existing Overlay
- New Overlay

TYP.

- Existing Overlay
- New Overlay
- Proposed Overlay

TYP.

- Existing Overlay
- New Overlay
- Proposed Overlay

TYP.

- Existing Overlay
- New Overlay
- Proposed Overlay

TYP.

- Existing Overlay
- New Overlay
- Proposed Overlay

TYP.

- Existing Overlay
- New Overlay
- Proposed Overlay

TYP.
REALIGNMENT TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (FEDERAL):

REALIGNMENT TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (NON-FEDERAL):

UPS K-LOADER PADS

EXISTING TYPICAL SECTION - TAXIWAY H

EXISTING TYPICAL SECTION - TAXIWAY J & SHOULDER

EXISTING TYPICAL SECTION - TAXIWAY J A ARM/DEARM APRON
**REVISIONS**

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**DATE ISSUED:** FEBRUARY 26, 2020

**REVIEWED BY:**

**DRAWN BY:**

**DESIGNED BY:**

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**SCHEDULE I (FEDERAL):**

REALIGNMENT TAXIWAY H AT MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

**SCHEDULE II (NON-FEDERAL):**

UPS K-LOADE PADS

---

**EXISTING TYPICAL SECTION - EAST TAXIWAY H**

---

**EXISTING TYPICAL SECTION - TAXIWAY B AT TAXIWAY C INTERSECTION**

---

**TYPICAL PAVEMENT SECTIONS**

(HEET 2 OF 8)

---

Attachment: FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River; Boise Airpo)
EXISTING TYPICAL SECTION - COMPASS PAD CONNECTOR

EXISTING TYPICAL SECTION - TAXIWAY F SHOULDER

EXISTING TYPICAL SECTION - RUNWAY 10R-28L SHOULDER
REALIGNMENT OF
TAXIWAY H AND
MILL/OVERLAY
PORTIONS OF
TAXIWAYS J & B

SCHEDULE I
(FEDERAL):
REALIGNMENT
TAXIWAY H MILL/OVERLAY
PORTIONS OF
TAXIWAYS J & B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER
PADS

TAXIWAY J CENTERLINE ALIGNMENT PROFILE
REVISIONS

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DATE ISSUED: FEBRUARY 26, 2020

REVIEWED BY: NAN

DRAWN BY: GPR

DESIGNED BY: JAC

RS&H PROJECT NUMBER: 225-0005-022

SHEET TITLE: SCHEDULE I

DRAWING NUMBER: 80

ISSUED FOR BID: 32

SCHEDULE I (FEDERAL): REALIGNMENT TAXIWAY H AT MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL): UPS K-LOADER PADS

PROPOSED TAXIWAY H CENTERLINE ALIGNMENT PROFILE

Packet Pg. 501

Attachment: FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River; Boise Airpo...
SCHEDULE I (FEDERAL):
REALIGNMENT TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):
UPS K-LOADER PADS

NOTES:
1. """" = EACH PSI STOOL AND DRAINAGE TROUGH"""
REALIGNMENT TAXIWAY H 
MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (FEDERAL):

SCHEDULE II (NON-FEDERAL):

UPS K-LOADE PADS

TAXIWAY B CENTERLINE ALIGNMENT PROFILE
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**SCHEDULE I (FEDERAL):**
- REALIGNMENT TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

**SCHEDULE II (NON-FEDERAL):**
- UPS K-LOADER PADS

**DRAWING NUMBER**
- 225-0005-022

**ISSUED FOR BID**
- Packet Pg. 505

**ATTACHMENT:**
- FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay; Knife River; Boise Airpo)
SCHEDULE I
(FEDERAL):
REALIGNMENT
TAXIWAY H AS
MILL/OVERLAY
PORTIONS
OF
TAXIWAYS J & B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER
PADS

NOTES:
1. USE EGRET FOR EDDISON CONTROL NOTED AND
DRAWN.

Packet Pg. 509
REVISIONS

DATE ISSUED:
REVIEWED BY:
DRAWN BY:
DESIGNED BY:

FEBRUARY 26, 2020

RS&H PROJECT NUMBER
SHEET TITLE
DRAWING NUMBER
ISSUED
FOR BID

SCHEDULE I
(FEDERAL):
REALIGNMENT
TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER PADS

NOTES:
1. USE METAL枹SIDE EDGE CONTROL RIBBON AND CENTERLINE;

\[ \text{Diagram of a runway with taxiways and aprons} \]

Legend:
- Airport Obstruction
- High Intensity Runway
- High Intensity Taxiway
- High Intensity Apron
- противообледенительное покрытие
- Centerline
- Taxiway Edge
- Apron Edge

Packet Pg. 510
REALIGNMENT
TAXIWAY H AT
MILL/OVERLAY
PORTIONS OF
TAXIWAYS J & B

SCHEDULE I
(FEDERAL):
REALIGNMENT
TAXIWAY H AT
MILL/OVERLAY
PORTIONS OF
TAXIWAYS J & B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER
PADS

EAST ARM / DISARM PAD

NOTES:
1. USEography FOR ENSURE CONTROL LIMITS AND
   CONFLS.

RS&H PROJECT NUMBER
SHEET TITLE
DRAWING NUMBER
ISSUED
FOR BID
SCHEDULE I (FEDERAL):
REALIGNMENT TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):
UPS K-LOADER PADS
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**DATE ISSUED:** FEBRUARY 26, 2020

**REVIEWED BY:**

**DRAWN BY:**

**DESIGNED BY:**

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### SCHEDULE I (FEDERAL):

- **REALIGNMENT TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B**

### SCHEDULE II (NON-FEDERAL):

- **UPS K-LOADER PADS**

---

**NEW MANHOLE TYPE I (AIRCRAFT RATED) DETAIL**

- **NEW INLET, TYPE I DETAIL**

- **MANHOLE TOP LOWERING DETAIL**

---

**SIDE VIEW**

**PLAN VIEW**

**SECTION A-A**

**SECTION C-C**

**TOP VIEW**

---

**UNDERDRAIN CONNECTION AT STRUCTURE DETAIL**
**SCHEDULE I (FEDERAL):**

REALIGNMENT TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

**SCHEDULE II (NON-FEDERAL):**

UPS K-LOADER PADS

---

**REINFORCED CONCRETE COLLAR DETAIL**

**SECTION A-A**

**PLAN**

**REINFORCED CONCRETE COLLAR DETAIL**

**GENERAL NOTES:**

1. Use adhesions of 3/4" thick, poured on the surface, and conforming to the dimensions shown.
2. Reinforcement shall be a 4" nominal, #4 reinforcing bar as shown.
3. Concrete collar connection to existing pipe shall be determined as part of proposed work.

---

**RCP TRENCH UNDER PAVED AREAS DETAIL**

**TIE TO EXISTING MANHOLE DETAIL**

**RCP TRENCH IN NON-PAVED AREAS DETAIL**

---

**DRAWING NUMBER**

225-0005-022

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**ISSUED**

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**ATTACHMENT:** FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River;...
REALIGNMENT
TAXIWAY H
MILL/OVERLAY
PORTIONS
TAXWAYS J & B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER
PADS

NOTE:
1. ALL MANDATORY NOTICES OR CONDITIONS MUST BE COMPLETED AND RECORDED ON THE DRAWING.

2. SEE SHEET 207-08 FOR MARKING DETAILS.

3. COLOR MARKING: USE THE COLORS AND MATERIALS LISTED AS INDICATED ON THE DRAWING SHEET.

4. ALL MARKING WORK MUST BE COMPLETED PRIOR TO THE MARKING DATE.

5. ALL MARKING WORK MUST BE COMPLETED PRIOR TO THE MARKING DATE.

6. SHADING SHOWING LOCATION OF MARKING MATERIALS SHOULD BE SHOWN ON THE DRAWING SHEET.

7. REFER TO THE RS&H SPECIFICATIONS.

8. CONSTRUCTION NOTAM REQUIRED FOR DEVELOPMENTS AFFECTED BY CHANGES OR ALTERATIONS.

SCHEDULE I
(FEDERAL):
REALIGNMENT
TAXIWAY H
MILL/OVERLAY
PORTIONS
TAXWAYS J & B

ISSUED
PACKET PG. 521
4.B.1.c
Attachment: FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River; Appendix C: Field Survey Reports.)
# Schedule I (Federal)

**Realignment of Taxiway H and Mill/Overlay Portions of Taxiways J & B**

## Packet Page 522

### Diagram

- **Legend:**
  - New Airport Project
  - Existing Airport Features
  - Proposed Airport Working (ARB)
  - Proposed Airport Working (CCT)
  - Proposed Airport Working (ARB/CCT)

### Notes

1. **Construction:** All existing surfaces shall be removed in the areas of proposed work. Existing pavement shall be clean and free of debris before the new pavement is placed. The edges of the existing pavement shall be recontoured to the proposed alignment.

### Schedule II (Non-Federal)

- **UPS K-Loader Pads**

---

**Packet Pg. 522**
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<td>REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J &amp; B</td>
<td>SCHEDULE I</td>
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<td>UPS K-LOADER PADS</td>
<td>SCHEDULE II</td>
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**Packet Pg. 524**

Attachment: FB 20-207 Drawings (E) (RES-153-20; FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River;
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DESCRIPTION

DATE

DATE ISSUED:

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

FEBRUARY 26, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED

FOR BID

SCHEDULE I

(FEDERAL):

REALIGNMENT

TAXIWAY H & MILL/OVERLAY

PORTIONS OF

TAXIWAYS J & B

SCHEDULE II

(NON-FEDERAL):

UPS K-LOADE

PADS
REVISIONS
NO.
DESCRIPTION
DATE

DATE ISSUED:
REVIEWED BY:
DRAWN BY:
DESIGNED BY:

FEBRUARY 26, 2020
RS&H PROJECT NUMBER
SHEET TITLE
DRAWING NUMBER
ISSUED FOR BID
SHEET OF
80

225-0005-022
SCHEDULE I
(FEDERAL):
REALIGNMENT OF
TAXIWAY H AND
MILL/OVERLAY
PORTIONS OF
TAXIWAYS J & B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER
PADS

JAC
GPR

57

1+00.00
2+00.00
3+00.00
4+00.00
5+00.00
6+00.00
6+50.00
8+00.00
9+00.00

4.B.1.c
Packet Pg. 526
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**DATE ISSUED:** FEBRUARY 26, 2020

**REVIEWED BY:**

**DRAWN BY:**

**DESIGNED BY:**

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**SCHEDULE I (FEDERAL):**

- REALIGNMENT TAXIWAY H AT MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

**SCHEDULE II (NON-FEDERAL):**

- UPS K-LOADER PADS

---

**Packet Pg. 527**

Attachment: FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River; Boise Airpo...
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (FEDERAL): REMOVAL OF

SCHEDULE II (NON-FEDERAL):

UPS K-LOADER PADS

Packet Pg. 530
REVISIONS

NO.

DESCRIPTION

DATE

DATE ISSUED:

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

FEBRUARY 26, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED

FOR BID

SCHEDULE I

(FEDERAL):

REALIGNMENT
TAXIWAY H AT
MILL/OVERLAY
PORTIONS OF
TAXIWAYS J & B

SCHEDULE II

(NON-FEDERAL):

UPS K-LOADE
PADS

4.B.1.c

REALIGNMENT
TAXIWAY H MILL/OVERLAY
PORTIONS OF TAXIWAYS J & B

ELECTRICAL
DEMOLITION
(SHEET 3 OF 8)

PACKET PG. 531

SCHEDULE I
(FEDERAL):
REALIGNMENT
TAXIWAY H AT
MILL/OVERLAY
PORTIONS OF
TAXIWAYS J &
B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER
PADS

NOTES:

1. SEE SHEET 402 FOR ELECTRICAL INFORMATION.
   2. SITE MEETINGS HELD 9/20/19 AND 9/27/19.
   3. FRP LINING TO BE PROVIDED AND COORDINATED WITH
      THE CONTRACTOR.
   4. LAYOUT OF CONSTRUCTION IN A NORTH TO SOUTH
      DIRECTION ALONG THE SOUTH END OF J & B.

4.B.1.c

Packet Pg. 532
Realign ment of Taxiway H and Mill/Overlay Portions of Taxiways J & B

Schedule I (FEDERAL):

- Realignment of Taxiway H and Mill/Overlay Portions of Taxiways J & B

Schedule II (NON-FEDERAL):

- UPS K-Loader Pads

Notes:

1. The design is subject to development changes, including cost and schedule impacts.
2. The project team is responsible for coordinating with other projects and utilities.
3. The design includes deferred cost considerations for future phases.
4. Additional site specific requirements are included for the project.

Drawn by: [Name]
Reviewed by: [Name]
Issued for Bid: [Date]

RS&H Project Number: [Number]
Sheet Title: [Title]
Drawing Number: [Number]

[Diagram of the realignment of Taxiway H and Mill/Overlay Portions of Taxiways J & B]
REVISIONS

REVIEWED BY:  
DRAWN BY:  
DESIGNED BY:  

DATE ISSUED:  FEBRUARY 26, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED FOR BID

SCHEDULE I
(FEDERAL):
REALIGNMENT TAXIWAY H AT MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II
(NON-FEDERAL):
UPS K-LOADER PADS

PACKET PG. 536

SCHEDULE I (FEDERAL):
REALIGNMENT TAXIWAY H MILL/OVERLAY PORTIONS OF TAXWAYS J & B

"REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXWAYS J & B"

SCHEDULE II (NON-FEDERAL):
UPs K-LOADERS PADS

PRE-CAST ELEVATED LIGHT DETAIL

FIXTURE SCHEDULE

<table>
<thead>
<tr>
<th>Type</th>
<th>Model No.</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luminaire L</td>
<td>LUM-01</td>
<td>1000 Lumen</td>
</tr>
<tr>
<td>Luminaire M</td>
<td>LUM-02</td>
<td>2000 Lumen</td>
</tr>
</tbody>
</table>

ELEVATED LIGHT DETAIL

1. Elevate the frame and mount the light fixture to the frame using the provided bolts and nuts.
2. Connect the electrical supply to the fixture using the provided wires.
3. Ensure the fixture is securely mounted and the frame is level.
4. Test the fixture for proper operation.

DIRECTIONS

1. Use a level to ensure the frame is level.
2. Secure the frame to the structure using the provided bolts.
3. Test the fixture for proper operation.

CUTLIST:

- Frame (2)
- Light fixture (2)
- Mounting bracket (2)
- Bolt (4)
- Nut (4)
- Wire (2)

ADDITIONAL NOTES:

- The fixture should be installed at least 10 feet above the ground.
- The mountings should be positioned at least 5 feet from each other.
- The electrical supply should be connected to the main electrical panel.

RS&H, INC.
5215 Wiley Post Way, Suite 510
Salt Lake City, UT 84116
801.924.8555
www.rsandh.com
SCHEDULE I (FEDERAL):
REALIGNMENT TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

Schedule II (Non-Federal):
UPS K-LOADER PADS

NOTE:
1. The work connected with the system shall be subject to the same control as the project as a whole.
2. The contractor shall provide engineering, technical, and design services for the entire system. These services shall be considered complete only after the work has been accepted by the owner or his representative in accordance with the applicable specifications and drawings.
3. The contractor shall provide all necessary materials and equipment to complete the work as described in the contract documents and drawings.
4. The contractor shall provide all necessary labor to complete the work as described in the contract documents and drawings.
5. The contractor shall provide all necessary supervision to ensure the work is completed in accordance with the contract documents and drawings.
6. The contractor shall provide all necessary records and drawings to document the work completed.
7. The contractor shall provide all necessary maintenance to ensure the work is maintained in accordance with the contract documents and drawings.
8. The contractor shall provide all necessary testing to ensure the work is tested in accordance with the contract documents and drawings.
9. The contractor shall provide all necessary commissioning to ensure the work is commissioned in accordance with the contract documents and drawings.
10. The contractor shall provide all necessary operating and maintenance instructions to the owner or his representative.

PACKET PG. 539

ATTACHMENT: FB-20-207 Drawings (E) (RES-153-20: FB-20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River; Boise Airpo...

E203 SHEET 70 OF 80
ISSUED 4.B.1.c
SCHEDULE I (FEDERAL):
REALIGNMENT TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):
UPS K-LOADER PADS

DRAINAGE
SURFACE MOUNTED RETRO-REFLECTIVE MARKER

ELEVATED LIGHT ON EXISTING L-6659
NEW L-6679 BASE CAN IN EXISTING PAVEMENT

RUNWAY GUARD LIGHT ELEVATION DETAIL

RS&H PROJECT NUMBER
Sheet Title
Drawing Number
Issued For Bid

Packet Pg. 540

4.B.1.c
REVISIONS

NO.

DESCRIPTION

DATE

DATE ISSUED:

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

FEBRUARY 26, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ISSUED

FOR BID

SHEET    OF

80

225-0005-022

SCHEDULE I

(FEDERAL):

REALIGNMENT OF
TAXIWAY H AND
MILL/OVERLAY
PORTIONS OF
TAXIWAYS J & B

SCHEDULE II

(NON-FEDERAL):

UPS K-LOADER
PADS

CONCRETE ENCAUCE EXISTING

1-WAY, 3" CONDUIT DETAIL

2-WAY, 2" DUCT BANK IN NEW
FULL-STRENGTH PAVEMENT DETAIL

3-WAY, 3" DUCT BANK IN NEW
FULL-STRENGTH PAVEMENT DETAIL

2-WAY, 4" DUCT BANK IN NEW
FULL-STRENGTH PAVEMENT DETAIL

2" DIRECT BURIED CONDUIT SECTION, UNDER SHOULDER

NOTES:

1. The 2-way support concrete section shall be located on the cut side

where depth below grade varies more than 7 inches. The concrete section shall be installed in the shoulder under the pavement, with the concrete section located either in the

shoulder or in the runway shoulder. The concrete section shall be

located in the shoulder under the pavement.

2. The concrete section shall extend the runway under the pavement, but it shall not extend across a taxiway or runway.

3. The concrete section shall extend under the pavement, but it shall not extend across a taxiway or runway.

4. All concrete sections shall be installed in the shoulder under the pavement, with the concrete section located either in the

shoulder or in the runway shoulder.

5. The concrete section shall extend the runway under the pavement, but it shall not extend across a taxiway or runway.

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**HANDHOLE SCHEDULE**

**RS&H, INC.**

5215 Wiley Post Way, Suite 510
Salt Lake City, UT 84116
801.924.8555

**REVISIONS**

**NO.**

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<thead>
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<th>DESCRIPTION</th>
<th>DATE</th>
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**DATE ISSUED:**

**REVIEWED BY:**

**DRAWN BY:**

**DESIGNED BY:**

FEBRUARY 26, 2020

**RS&H PROJECT NUMBER**

**SHEET TITLE**

**DRAWING NUMBER**

**ISSUED**

**FOR BID**

**SHEET**

**OF**

80

**225-0005-022**

**SCHEDULE I**

(FEDERAL):

REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

**SCHEDULE II**

(NON-FEDERAL):

UPS K-LOADER

PADS

**NOTES:**

1. All materials not specifically listed are to be furnished and applied in accordance with the specifications.
2. All workmanship is to be performed in accordance with the specifications.
3. All workmanship is to be completed in accordance with the specifications.
4. All workmanship is to be completed in accordance with the specifications.
5. All workmanship is to be completed in accordance with the specifications.
6. All workmanship is to be completed in accordance with the specifications.
7. All workmanship is to be completed in accordance with the specifications.
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20. All workmanship is to be completed in accordance with the specifications.

**ATTACHMENT:**

FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River; Boise Airpo)

**SCHEDULE I**

REALIGNMENT TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

**SCHEDULE II**

(Non-Federal):

UPS K-LOADER

PADS

**ELECTRICAL DETAILS**

**ATTACHMENT:**

FB 20-207 Drawings (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife River; Boise Airpo)

**Packet Pg. 543**
NEW TAXIWAY EDGE LIGHT ON EXISTING PAVEMENT

EXISTING EDGE LIGHT ON TW B AT 30'C

EXISTING EDGE LIGHT ON TW A AT 30'C
REALIGNMENT TAXIWAY H & MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I (FEDERAL):
REALIGNMENT TAXIWAY H MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):
UPS K-LOADER PADS

Packet Pg. 545
### TAXIWAY EDGE LIGHT SCHEDULE

<table>
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<tr>
<th>REVISION NO.</th>
<th>DESCRIPTION</th>
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</table>

| DATE ISSUED: | FEBRUARY 26, 2020 |
| REVIEWED BY: |             |
| DRAWN BY:    |             |
| DESIGNED BY: |             |

### TAXIWAY EDGE LIGHT SCHEDULE - FUTURE USE

<table>
<thead>
<tr>
<th>REVISION NO.</th>
<th>DESCRIPTION</th>
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<tbody>
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### ELEVATED RAIL'S SCHEDULE

<table>
<thead>
<tr>
<th>REVISION NO.</th>
<th>DESCRIPTION</th>
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<tbody>
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### SCHEDULE I

#### (FEDERAL):
- REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

#### SCHEDULE II

#### (NON-FEDERAL):
- UPS K-LOADER PADS

### RS&H PROJECT NUMBER

### SHEET TITLE

### DRAWING NUMBER

### ISSUE

### FOR BID

### SHEET      OF

### 80

---

### NOTES:

1. These tables are to be filled in by project staff and should not appear on the final schedule.
2. The temporary or permanent edge lights will be installed on the edge of the taxiway and will be in a fixed position.
3. The proposed edge lights will be in accordance with the project guidelines.

---

### Packet Pg. 546

---

REALIGNMENT TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

NOTES

1. REMOVE EXISTING MILLING AND REPLACE WITH CONCRETE.
2. CONSTRUCTION TO PROTECT SHOULDER AND OPERATE DURING CONSTRUCTION.

SCHEDULE I (FEDERAL):

RS&H, INC.
5215 Wiley Post Way, Suite 510
Salt Lake City, UT 84116
801.924.8555
www.rsandh.com

SCHEDULE II (NON-FEDERAL):

UPS K-LOADER PADS
CITY OF BOISE
PROPOSAL FORM

TO: City of Boise at the Purchasing Office
150 North Capitol Boulevard
Boise, Idaho 83702

PROJECT: Realignment of Taxiway H and Mill/Overlay
Portions of Taxiways J And B
FAA AIP Project No.: 3-16-0003-073-2020
City Project No.: F/B 20-207
RS&H Project No.: 225-0005-022

BIDDER: Knife River Corporation - Mountain West

BIDDER'S ADDRESS: 5450 W Gowen Road, Boise, ID 83709

DATE: 3/25/2020

BIDDER'S REPRESENTATIVE (to be contacted for additional information on this proposal):

Steve Earl (Name) (208) 362-6152 (Telephone Number)

The undersigned declares that no person in the employ of the City of Boise, Idaho (herein referred to as OWNER) is peculiarly interested in this proposal, or in the contract or the work which he proposed to do; that he has carefully examined the contract and specifications and has informed himself fully in regard to all conditions pertaining to the site where the work is to be done and carefully estimated on the work. He understands that the OWNER, its agents and employees, are not to be in any manner held responsible for the accuracy of, or bound by, any estimates or plans of underground structures relating to the work and that if any have been given or made, they are to be considered solely as a base for filling out and preparing several proposals.

The undersigned proposes to furnish all labor, equipment material required for the above outlined construction at the airport known as Boise Airport located in the City of Boise, Idaho, in accordance with the accompanying specifications and plans prepared for the OWNER for the sums specified herein, subject to additions and deductions according to the specifications and in all respects to the terms thereof.

It is understood that all workmanship and materials under all items of work are guaranteed for one year from the date of final acceptance, unless otherwise specified. It is understood that the OWNER reserves the right to accept or reject any or all bids and to waive any informalities. Wages not less than the minimum rates or wages, as pre-determined for this project by the Secretary of the U.S. Department of Labor, were used in the preparation of this proposal. It is agreed that the description under each item, being stated, implies although it does not mention, all incidentals and that the prices stated are intended to cover all such work, materials and incidentals and constitute bidders obligations as described in the specifications, and any details not specifically mentioned, but evidently included in the contract shall be compensated for in the item which most logically includes it.
The bidder expressly agrees that should environmental permits not be granted for items contingent on their receipt, the OWNER shall delete those items from the Contract without Supplemental Agreement or Change Order. In this event, the bidder agrees that the unit prices proposed for non-environmentally contingent items will remain unchanged and that no claims relating to the deletion of items contingent on environmental permitting will be made.

The Owner reserves the right to award any, all, or none of the alternate bid items.

Enclosed herewith is the Proposal Bond in the form specified in Section 20 of the General Provisions which is submitted as a guarantee of the good faith of the Proposal. The Bidder agrees that, upon receipt of notice to award, he will, within 10 calendar days, execute the Contract in accordance with the Proposal as accepted, and satisfy the Contract bonding and insurance requirements stipulated in Section 30 of the General Provisions; and that upon his failure or refusal to do so, the Proposal Bond accompanying his bid shall be forfeited to and become the property of the OWNER as liquidated damages for such failure or refusal.

ADDENDA

The bidder hereby acknowledges that he has received the following addenda:

<table>
<thead>
<tr>
<th>Addenda No.</th>
<th>Dated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3/12/2020</td>
</tr>
<tr>
<td>2</td>
<td>3/16/2020</td>
</tr>
<tr>
<td>3</td>
<td>3/19/2020</td>
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</table>

LIQUIDATED DAMAGES

The bidder acknowledges that he is aware of the liquidated damages that are part of this contract:

<table>
<thead>
<tr>
<th>PHASE</th>
<th>LIQUIDATED DAMAGES COST</th>
<th>ALLOWED CONSTRUCTION TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1A</td>
<td>$2,500/day</td>
<td>65 Calendar Days</td>
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<tr>
<td>Phase 1B</td>
<td>$2,500/day</td>
<td>35 Calendar Days</td>
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<tr>
<td>Phase 1C</td>
<td>$2,500/day</td>
<td>15 Calendar Days</td>
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<tr>
<td>Phase 2A</td>
<td>$2,500/day</td>
<td>3 Calendar Days</td>
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<tr>
<td>Phase 2B</td>
<td>$2,500/day</td>
<td>7 Calendar Days</td>
</tr>
<tr>
<td>Phase 3</td>
<td>$2,500/day</td>
<td>30 Calendar Days</td>
</tr>
</tbody>
</table>

The total contract duration is 90 calendar days. Contract time starts on NTP.
TAXES

The Bidder agrees that any applicable Federal, State and Local sales and use taxes, are included in the stated bid prices. Since often the City of Boise, Idaho is exempt from taxes for equipment, materials, and services, it is the responsibility of the Contractor to determine whether sales taxes are applicable. The Contractor is liable for any applicable taxes which are not included in the stated bid prices.

NOTE: THE BID PRICES SET FORTH ON THE ATTACHED SHEETS SHALL BE CONSIDERED FIRM BIDS NOT SUBJECT TO PRICEADJUSTMENT.

SIGNATURE ACKNOWLEDGES THAT: (Check below)

X Bid is in full compliance with the Plans and Specifications.

By: Calvin DeWall
Title: Authorized Agent

By: Jasee Roslin
Title: Authorized Agent

Required at Bid Opening
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description and Unit Price in Words</th>
<th>Estimated Quantity</th>
<th>Unit Price in Numbers</th>
<th>Total Amount</th>
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<tbody>
<tr>
<td>C-100-14.1</td>
<td>Contractor Quality Control Program at one hundred seventy thousand dollars</td>
<td>1</td>
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<tr>
<td>C-100-14.2</td>
<td>Permitting Allowance at one thousand one hundred dollars and zero cents</td>
<td>1</td>
<td>$10.00</td>
<td>$10,000.00</td>
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<td>C-102-5.1</td>
<td>Storm Water Pollution Prevention Plan at five thousand dollars and zero cents</td>
<td>1</td>
<td>$5,000.00</td>
<td>$5,000.00</td>
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<td>C-102-5.2</td>
<td>Implement SWPPP at one thousand one hundred dollars and zero cents</td>
<td>1</td>
<td>$1,000.00</td>
<td>$1,000.00</td>
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<tr>
<td>C-105-6.1</td>
<td>Mobilization at three hundred thirty thousand dollars and zero cents</td>
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<td>$330,000.00</td>
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<td>Item Description and Unit Price in Words</td>
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<td>Unit</td>
<td>Unit Price in Numbers</td>
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<tr>
<td>P-101-5.1</td>
<td>2-Inch Nominal Depth Milling at six ____________ dollars and __ zero ____________ cents</td>
<td>260</td>
<td>SY</td>
<td>$ 6.00</td>
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<td>P-101-5.2</td>
<td>2.5-Inch Nominal Depth Milling at two ____________ dollars and __ fifty ____________ cents</td>
<td>5,100</td>
<td>SY</td>
<td>$ 2.50</td>
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<tr>
<td>P-101-5.3</td>
<td>3-Inch Nominal Depth Milling at two ____________ dollars and __ twenty ____________ cents</td>
<td>19,550</td>
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<td>$ 2.20</td>
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<tr>
<td>P-101-5.4</td>
<td>Runway Lap Joint Mill at thirty five ____________ dollars and __ zero ____________ cents</td>
<td>100</td>
<td>SY</td>
<td>$ 35.00</td>
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<tr>
<td>P-101-5.5</td>
<td>Full Depth Asphalt Removal at three ____________ dollars and __ twenty ____________ cents</td>
<td>20,350</td>
<td>SY</td>
<td>$ 3.20</td>
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<tr>
<td>P-101-5.6</td>
<td>Full Depth Asphalt/PCC Removal at twelve ____________ dollars and __ zero ____________ cents</td>
<td>600</td>
<td>SY</td>
<td>$ 12.00</td>
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<tr>
<td>P-101-5.7</td>
<td>Pavement Marking Blackout at two ____________ dollars and __ zero ____________ cents</td>
<td>600</td>
<td>SF</td>
<td>$ 2.00</td>
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<tr>
<td>P-101-5.8</td>
<td>Pavement Marking Obliteration at three ____________ dollars and __ zero ____________ cents</td>
<td>3,500</td>
<td>SF</td>
<td>$ 3.00</td>
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<td>Estimated Quantity</td>
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<tr>
<td>P-105-5.1</td>
<td>Temporary Construction Items at four hundred fifty thousand dollars and zero cents</td>
<td>1</td>
<td>LS</td>
<td>$450,000.00</td>
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<td>P-151-4.1</td>
<td>Clearing at thirteen hundred dollars and zero cents</td>
<td>5</td>
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<td>$1,300.00</td>
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<td>P-152-4.1</td>
<td>Unclassified Excavation at nine dollars and zero cents</td>
<td>32,100</td>
<td>CY</td>
<td>$9.00</td>
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<tr>
<td>P-152-4.2</td>
<td>Over-Excavation at twelve dollars and zero cents</td>
<td>3,210</td>
<td>CY</td>
<td>$12.00</td>
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<tr>
<td>P-154-5.1</td>
<td>Subbase Course at thirty two dollars and zero cents</td>
<td>12,120</td>
<td>CY</td>
<td>$32.00</td>
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<td>P-154-5.2</td>
<td>Separation Fabric at one dollar and twenty cents</td>
<td>20,500</td>
<td>SY</td>
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<td>P-209-5.1</td>
<td>Crushed Aggregate Base Course at forty five dollars and zero cents</td>
<td>4,250</td>
<td>CY</td>
<td>$45.00</td>
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<tr>
<td>P-401-8.1</td>
<td>Bituminous Surface Course at forty five dollars and zero cents</td>
<td>13,200</td>
<td>TON</td>
<td>$45.00</td>
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<tr>
<td>P-401-8.2</td>
<td>Bituminous Material, PG 70-28 at five hundred seventy five dollars and zero cents</td>
<td>792</td>
<td>TON</td>
<td>$575.00</td>
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<td>P-603-5.1</td>
<td>Bituminous Tack Coat at five __________ dollars and __________ cents</td>
<td>3,600</td>
<td>GAL</td>
<td>$ 5.00</td>
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<td>P-620-5.1</td>
<td>Pavement Markings without Reflective Beads – Black Outline at zero __________ dollars and __________ cents</td>
<td>20,000</td>
<td>SF</td>
<td>$ 0.80</td>
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<td>P-620-5.2</td>
<td>Pavement Markings without Reflective Beads – Prime Coat at zero __________ dollars and __________ cents</td>
<td>20,750</td>
<td>SF</td>
<td>$ 0.80</td>
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<td>P-620-5.3</td>
<td>Temporary Pavement Markings at three __________ dollars and __________ cents</td>
<td>210</td>
<td>SF</td>
<td>$ 3.00</td>
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<td>D-701-4.1</td>
<td>Remove Reinforced Concrete Pipe (10&quot;-18&quot;) at ten __________ dollars and __________ cents</td>
<td>610</td>
<td>LF</td>
<td>$ 10.00</td>
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<tr>
<td>D-701-4.2</td>
<td>Remove Corrugated Metal Pipe (15&quot;-18&quot;) at five __________ dollars and __________ cents</td>
<td>1,910</td>
<td>LF</td>
<td>$ 5.00</td>
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<tr>
<td>D-701-4.3</td>
<td>Install New 18&quot; RCP Class V, Complete at sixty six __________ dollars and __________ cents</td>
<td>890</td>
<td>LF</td>
<td>$ 66.00</td>
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<tr>
<td>D-701-4.4</td>
<td>Install New 15&quot; RCP Class V, Complete at ninety seven __________ dollars and __________ cents</td>
<td>910</td>
<td>LF</td>
<td>$ 97.00</td>
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<td>D-705-5.1</td>
<td>Remove and Cap 4-Inch Underdrain Pipe and Cleanout at zero</td>
<td>70</td>
<td>$14.00</td>
<td>$980.00</td>
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<td>D-705-5.2</td>
<td>4-Inch Perforated Underdrain Pipe, complete at eighteen and zero</td>
<td>1,600</td>
<td>$18.00</td>
<td>$28,800.00</td>
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<td>D-705-5.3</td>
<td>4-Inch Non-Perforated Underdrain Pipe, complete at twenty and zero</td>
<td>275</td>
<td>$20.00</td>
<td>$5,500.00</td>
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<td>D-705-5.4</td>
<td>4-Inch Underdrain Cleanout at eight hundred forty and zero</td>
<td>15</td>
<td>$840.00</td>
<td>$12,600.00</td>
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<td>D-751-5.1</td>
<td>Inlet Removal at five hundred fifty and zero</td>
<td>7</td>
<td>$$50.00</td>
<td>$3,500.00</td>
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<td>D-751-5.2</td>
<td>Install Underdrain Inspection Pit at nine thousand and zero</td>
<td>1</td>
<td>$9,000.00</td>
<td>$9,000.00</td>
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<td>D-751-5.3</td>
<td>Tie to Existing Catch Basin at nine hundred and zero</td>
<td>3</td>
<td>$900.00</td>
<td>$2,700.00</td>
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<td>D-751-5.4</td>
<td>Install New Inlet, Type at eleven thousand and zero</td>
<td>5</td>
<td>$11,000.00</td>
<td>$55,000.00</td>
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<td>D-751-5.5</td>
<td>Install New Manhole, Type at fifteen thousand and zero</td>
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<td>$15,000.00</td>
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<td>D-751-5.6</td>
<td>Adjust Manhole at four thousand four hundred dollars and zero cents</td>
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<td>L-105-7.1</td>
<td>Temporary Airfield Lighting at eleven thousand dollars and zero cents</td>
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<td>LS</td>
<td>$11,000.00</td>
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<td>L-105-7.2</td>
<td>Removal of Guidance Sign and Foundation at eleven hundred dollars and zero cents</td>
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<td>EA</td>
<td>$1,100.00</td>
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<td>L-105-7.3</td>
<td>Removal of Elevated Taxiway Edge Light and Base at two hundred twenty dollars and zero cents</td>
<td>43</td>
<td>EA</td>
<td>$220.00</td>
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<td>L-105-7.4</td>
<td>Removal of Elevated Taxiway Edge Light, Base to Remain at one hundred ten dollars and zero cents</td>
<td>14</td>
<td>EA</td>
<td>$110.00</td>
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<tr>
<td>L-105-7.5</td>
<td>Removal of In-Pavement Taxiway Edge Light, Base to Remain at one hundred ten dollars and zero cents</td>
<td>1</td>
<td>EA</td>
<td>$110.00</td>
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<tr>
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<tr>
<td>L-105-7.6</td>
<td>Removal of In-Pavement Runway Edge Light and Base at six hundred sixty dollars and zero cents</td>
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<td>$660.00</td>
<td>$660.00</td>
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<td>L-105-7.7</td>
<td>Removal of Base Can with Retroreflective Marker Fastened to Cover Plate at one hundred sixty five dollars and zero cents</td>
<td>3</td>
<td>EA</td>
<td>$165.00</td>
<td>$495.00</td>
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<td>L-105-7.8</td>
<td>Removal of Retroreflective Taxiway Edge Marker at fifty five dollars and zero cents</td>
<td>8</td>
<td>EA</td>
<td>$55.00</td>
<td>$440.00</td>
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<td>L-105-7.9</td>
<td>Removal of Surface Mounted Taxiway Centerline Retroreflective Marker at fifty five dollars and zero cents</td>
<td>24</td>
<td>EA</td>
<td>$55.00</td>
<td>$1,320.00</td>
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<td>L-105-7.10</td>
<td>Removal of Base Can at one hundred sixty five dollars and zero cents</td>
<td>4</td>
<td>EA</td>
<td>$165.00</td>
<td>$660.00</td>
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<tr>
<td>L-105-7.11</td>
<td>Removal of Electrical Handhole at eleven hundred dollars and zero cents</td>
<td>3</td>
<td>EA</td>
<td>$1,100.00</td>
<td>$3,300.00</td>
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<td>Item No.</td>
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<tr>
<td>L-108-5.1</td>
<td>No. 8 AWG, 5kV, L824, Type C Cable, Installed in Trench, Duct Bank or Conduit at one hundred dollars and fifty cents</td>
<td>14,050</td>
<td>LF</td>
<td>$ 1.50</td>
<td>$ 21,075.00</td>
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<tr>
<td>L-108-5.2</td>
<td>No. 6 AWG, Solid, Bare Counterpoise Wire, Installed in Trench, Above the Duct Bank at two hundred dollars and zero cents</td>
<td>4,250</td>
<td>LF</td>
<td>$ 2.00</td>
<td>$ 8,500.00</td>
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<tr>
<td>L-109-7.1</td>
<td>Installation of Equipment within Existing vault at twenty five thousand dollars and zero cents</td>
<td>1</td>
<td>LS</td>
<td>$25,000.00</td>
<td>$ 25,000.00</td>
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<tr>
<td>L-110-5.1</td>
<td>Clear Existing Conduit, Remove Existing Cables at one hundred dollars and zero cents</td>
<td>5,900</td>
<td>LF</td>
<td>$ 1.00</td>
<td>$ 5,900.00</td>
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<td>L-110-5.2</td>
<td>Removal of Cable and Conduit at fifteen hundred dollars and zero cents</td>
<td>2,650</td>
<td>LF</td>
<td>$15.00</td>
<td>$ 39,750.00</td>
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<tr>
<td>L-110-5.3a</td>
<td>Concrete-Encased, 1-Way, 2-Inch PVC Conduit, Schedule 40 at twenty one hundred dollars and zero cents</td>
<td>330</td>
<td>LF</td>
<td>$21.00</td>
<td>$ 6,930.00</td>
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<tr>
<td>L-110-5.3b</td>
<td>CLSM Encased, 1-Way, 2-Inch PVC Conduit, Schedule 40 at twenty one hundred dollars and zero cents</td>
<td>2110</td>
<td>LF</td>
<td>$20.00</td>
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<td>L-110-5.3c</td>
<td>Direct Earth Buried, 1-Way, 2-Inch PVC Conduit, Schedule 40 at fifteen dollars and zero cents</td>
<td>70</td>
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<td>L-110-5.4</td>
<td>Concrete-Encased, 3-Way, 3-Inch PVC Conduit, Schedule 40 at thirty two dollars and zero cents</td>
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<td>LF</td>
<td>$32.00</td>
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<td>L-110-5.5</td>
<td>Concrete-Encased, 4-Way, 4-Inch PVC Conduit, Schedule 80 at fifty four dollars and zero cents</td>
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<td>$54.00</td>
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<td>L-110-5.6</td>
<td>Concrete-Encased Existing 2-Way, 4-Inch PVC Conduit, Schedule 40 at thirty three dollars and zero cents</td>
<td>85</td>
<td>LF</td>
<td>$33.00</td>
<td>$2,805.00</td>
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<td>L-110-5.7</td>
<td>Concrete Encase Existing 4-Way, 5-Inch PVC Conduit at sixty five dollars and zero cents</td>
<td>235</td>
<td>LF</td>
<td>$65.00</td>
<td>$15,275.00</td>
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<tr>
<td>L-110-5.8</td>
<td>Concrete Encase Existing 1-Way, 3-Inch PVC Conduit at forty dollars and zero cents</td>
<td>190</td>
<td>LF</td>
<td>$40.00</td>
<td>$7,600.00</td>
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<td>L-110-5.9</td>
<td>Removal of Miscellaneous Concrete Duct Banks at twenty two dollars and zero cents</td>
<td>520</td>
<td>LF</td>
<td>$22.00</td>
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<td>L-115-5.1</td>
<td>Electrical Handhole, 4'x4'x4', Aircraft Rated at twelve thousand dollars and zero cents</td>
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<td>EA</td>
<td>$12,000.00</td>
<td>$60,000.00</td>
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<td>L-115-5.2</td>
<td>L-867B Base Can in New Asphalt Pavement at one thousand one hundred dollars and zero cents</td>
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<td>EA</td>
<td>$1,100.00</td>
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<td>L-115-5.3</td>
<td>L-867B Base Can in Existing Pavement at one thousand eight hundred dollars and zero cents</td>
<td>1</td>
<td>EA</td>
<td>$1,800.00</td>
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<td>L-115-5.4</td>
<td>New 3/8&quot; Cover Plate and Bolts for Existing L-867B Base Can at three hundred dollars and zero cents</td>
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<td>L-115-5.5</td>
<td>Spacer Ring Adjustment for Existing L-867B Base Can at three hundred dollars and zero cents</td>
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<td>EA</td>
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<td>L-125-5.1</td>
<td>L-861T(L) Taxiway Elevated Edge Light on New L-867 B Light Base in New Pavement at one thousand seven hundred dollars and zero cents</td>
<td>21</td>
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<td>$1,700.00</td>
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<td>L-125-5.2</td>
<td>L-861T(L) Taxiway Elevated Edge Light on New 12&quot; L-867B Light Base in New Pavement at one thousand nine hundred dollars and zero cents</td>
<td>1</td>
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<td>L-861T Elevated Taxiway Edge Light on New L-867 Light Base in New Pavement at one thousand five hundred</td>
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<td>dollars and zero cents</td>
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<td>L-125-5.4</td>
<td>L-861T Elevated Taxiway Edge Light on Existing L-867B Light Base with Risers at one thousand three hundred</td>
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<td>L-125-5.5</td>
<td>L-862 Elevated Runway Edge Light on Adapter for Existing L-868B Light Base at one thousand three hundred</td>
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<td>L-125-5.6</td>
<td>L-860C In-Pavement Runway Edge Light on New L-868B Light Base at three thousand five hundred dollars</td>
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<td>and zero cents</td>
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<td>L-125-5.7</td>
<td>L-853 Elevated Taxiway Edge Retrospective Marker at two hundred dollars and zero cents</td>
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<td>L-125-5.8a</td>
<td>L-858(L) Guidance Sign, Size 1, 1 Module, on New Foundation at five thousand five hundred dollars and</td>
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<tr>
<td>L-125-5.8b</td>
<td>L-858(L) Guidance Sign, Size 1, 2 Module, on New Foundation at seven thousand eight hundred dollars and zero cents</td>
<td>2</td>
<td>EA</td>
<td>$7,800.00</td>
<td>$15,600.00</td>
</tr>
<tr>
<td>L-125-5.8c</td>
<td>L-858(L) Guidance Sign, Size 1, 3 Module, on New Foundation at eight thousand dollars and zero cents</td>
<td>1</td>
<td>EA</td>
<td>$8,000.00</td>
<td>$8,000.00</td>
</tr>
<tr>
<td>L-125-5.8d</td>
<td>L-858(L) Guidance Sign, Size 1, 4 Module, on New Foundation at nine thousand five hundred dollars and zero cents</td>
<td>1</td>
<td>EA</td>
<td>$9,500.00</td>
<td>$9,500.00</td>
</tr>
<tr>
<td>L-125-5.8e</td>
<td>Remove and Relocate 2 Module Guidance Sign on New Foundation at one thousand five hundred dollars and zero cents</td>
<td>1</td>
<td>EA</td>
<td>$1,500.00</td>
<td>$1,500.00</td>
</tr>
<tr>
<td>L-125-5.9</td>
<td>L-867 Base Can and Isolated Transformer for L-804 Elevated Runway Guard Light at three thousand dollars and zero cents</td>
<td>2</td>
<td>EA</td>
<td>$3,000.00</td>
<td>$6,000.00</td>
</tr>
</tbody>
</table>

TOTAL AMOUNT OF SCHEDULE I (FEDERAL) (IN WORDS):

Three million nine hundred five thousand one hundred twenty DOLLARS and zero CENTS

Total Schedule I (Federal) Amount: $3,905,120.00

NOTE: BID AWARD WILL BE MADE BASED ON THE LOWEST TOTAL AMOUNT FOR SCHEDULE I (FEDERAL)
CITY OF BOISE – BID SCHEDULE II (NON-FEDERAL)

AIRPORT: BOISE AIRPORT
PROJECT: REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description and Unit Price in Words</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Unit Price in Numbers</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-101-5.9</td>
<td>Crack Repair at five dollars and zero cents</td>
<td>1,800</td>
<td>LF</td>
<td>$ 5.00</td>
<td>$ 9,000.00</td>
</tr>
<tr>
<td>P-101-5.10</td>
<td>Removal of Bituminous Pavement at five dollars and zero cents</td>
<td>300</td>
<td>SY</td>
<td>$ 5.00</td>
<td>$ 1,500.00</td>
</tr>
<tr>
<td>P-101-5.11</td>
<td>Crushed Drained Rock Placement 4-Inch Nominal Depth at five dollars and zero cents</td>
<td>8,100</td>
<td>SY</td>
<td>$ 5.00</td>
<td>$ 40,500.00</td>
</tr>
<tr>
<td>P-109-5.1</td>
<td>Sawcutting at five dollars and zero cents</td>
<td>380</td>
<td>LF</td>
<td>$ 5.00</td>
<td>$ 1,900.00</td>
</tr>
<tr>
<td>ISPWC-202.4.1.D.1</td>
<td>Unclassified Excavation at twenty five dollars and zero cents</td>
<td>289</td>
<td>SY</td>
<td>$ 25.00</td>
<td>$ 7,225.00</td>
</tr>
<tr>
<td>P-608-R-8.1</td>
<td>Asphalt Surface Treatment at five dollars and zero cents</td>
<td>1,660</td>
<td>SY</td>
<td>$ 5.00</td>
<td>$ 8,300.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description and Unit Price in Words</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Unit Price in Numbers</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISPWC 705.4.1.A.1</td>
<td>Portland Cement Concrete Pavement (Class 5000 AF, 10&quot; Thick) at two hundred fifty dollars and zero cents</td>
<td>289</td>
<td>SY</td>
<td>$250.00</td>
<td>$72,250.00</td>
</tr>
<tr>
<td>ISPWC 802-4.1.A.1</td>
<td>Re-Grade and Recompack Base Course at ten dollars and zero cents</td>
<td>289</td>
<td>SY</td>
<td>$10.00</td>
<td>$2,890.00</td>
</tr>
<tr>
<td>L-109-7.2</td>
<td>Installation of ACE 3 ALCMS/CCR Interface Unit Including Graphic Update at forty five thousand dollars and zero cents</td>
<td>1</td>
<td>LS</td>
<td>$45,000.00</td>
<td>$45,000.00</td>
</tr>
<tr>
<td>L-125-5.10</td>
<td>L-804 Elevated Runway Guard Light Fixture (ADB Safegate L804RGL Code 44A474-4111) at five thousand dollars and zero cents</td>
<td>2</td>
<td>EA</td>
<td>$5,000.00</td>
<td>$10,000.00</td>
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TOTAL AMOUNT OF SCHEDULE II (NON-FEDERAL) (IN WORDS):

One hundred ninety eight thousand five hundred sixty five DOLLARS zero CENTS

Total Schedule II (Non-Federal) Amount: $198,565.00

NOTE: BID AWARD WILL BE MADE BASED ON THE LOWEST TOTAL AMOUNT FOR SCHEDULE I (FEDERAL)
Pursuant to Section 67-2310, 54-1901, and 54-1902, Idaho Code, names and addresses of subcontractors to whom work will be awarded, if the undersigned is awarded the contract, are as indicated below (write "N/A", if not applicable): Public Works license will be required at time of bid signing. If available, please provide now (License information NOT required for submitting bid).

### Electrical

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Idaho Public Works Contractor’s License Number</th>
<th>Electrician License Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colvico Inc</td>
<td>PWC-C-11036</td>
<td>ELE-C-4858</td>
</tr>
</tbody>
</table>

### Plumbing

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<thead>
<tr>
<th>Company Name</th>
<th>Idaho Public Works Contractor’s License Number</th>
<th>Plumbing License Number</th>
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<tbody>
<tr>
<td>&quot;N/A&quot;</td>
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</tr>
</tbody>
</table>

### HVAC

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Idaho Public Works Contractor’s License Number</th>
<th>HVAC License Number</th>
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</thead>
<tbody>
<tr>
<td>&quot;N/A&quot;</td>
<td></td>
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</tr>
</tbody>
</table>
Respectfully submitted by:

Name of Business: Knife River Corporation - Mountain West

Address: 5450 W Gowen Road

City: Boise

State: Idaho Zip Code: 83709

Phone No.: (208) 362-6152 Fax No.: (208) 562-5045

Federal Tax ID No.: 32-0557790

Email Address: krsi.estimating@kniferiver.com

Signature: 

Printed Name: Jessee Rosin

Title: Authorized Agent

Date: 3/25/2020

[Seal]
(Bidder shall also submit original and copy of entire Bid Proposal)

CITY OF BOISE

PROPOSAL AFFIDAVIT

The following affidavit must be executed in order that your proposal may be considered.

STATE OF IDAHO

CITY OF BOISE

Jessee Rosin of lawful age, being first duly sworn, upon his oath, deposes and says:

That he executed the accompanying Proposal on behalf of the Contractor therein named, and that he had lawful authority so to do, and said Contractor has not directly or indirectly, entered into any agreement, expressed or implied, with any Contractor or Contractors, having for its object the controlling of the price or amount of such Proposal or any Proposals, the limiting of the Proposal of Contractors, the parceling or farming out to any Contractor or Contractors, to other persons of any part of the Contract or any of the subject matter of the Proposals, or of the profits thereof, and that he has not and will not divulge the sealed Proposal to any person whomsoever, except those having a partnership or other financial interest with him in said Proposal or Proposals, until after the sealed Proposal or Proposals are opened.

Signed: ____________________________

Subscribed and sworn to before me this 25th day of March 2020

Notary Public

State Licensed to do business in Idaho

Firm Name Knife River Corporation - Mountain West Phone Number (208) 362-6152

Address 5450 W Gowen Road City Boise State ID Zip 83709

Check whether: Corporation X Individual Partnership

Incorporated in the state of Delaware

(If partnership, give name and address of each partner; if corporation, give name, title, and business address of President, Secretary, and Treasurer.)

N/A
THIS PAGE INTENTIONALLY LEFT BLANK
The undersigned understands that the quantities of work represented in this proposal are approximate only and are intended to principally serve as a guide in evaluation of the bids.

CITY OF BOISE

PROPOSAL BOND

(Not to be filled in if a Cashier’s check is submitted)

KNOW ALL MEN BY THESE PRESENTS: That the undersigned Bidder, Knife River Corporation - Mountain West, as Principal, and firmly bound unto the City of Boise, Idaho in the sum of Five Percent of Amount Bid dollars ($ 5% ), for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THIS OBLIGATION is such that if Principal: Knife River Corporation - Mountain West

1. Does not withdraw the attached Proposal of Five Percent of Amount Bid dollars ($ 5% ) for the improvement of Boise Airport,

FAA AIP Project No. 3-16-0003-073-2020, City Project No. F/B 20-207, for a period of forty-five (45) days after the date on which the bids are opened; and

2. Enters into the written contract and furnishes the required Certificates of Insurance, Payment and Performance Bonds, with Surety or Sureties acceptable to the City of Boise, Idaho, within ten (10) days after notice that the said Proposal is accepted, then this obligation shall be void; otherwise the same shall be in full force and the full amount of the Proposal Bond shall be paid to the City of Boise, Idaho as stipulated herein as liquidated damages.

Signed this 25th day of March 2020.

Knife River Corporation - Mountain West

5450 W. Gowen Road, Boise, ID 83709

Principal
THE PERSON SIGNING FOR THE PRINCIPAL SHALL, IN HIS OWN HANDWRITING, SIGN THE PRINCIPAL’S NAME, HIS OWN NAME, AND HIS TITLE. WHERE THE PERSON SIGNING FOR A CORPORATION IS OTHER THAN THE PRESIDENT OR VICE PRESIDENT, HE MUST FURNISH A CORPORATE RESOLUTION SHOWING HIS AUTHORITY TO BIND THE CORPORATION.

By:  

Title:

Liberty Mutual Insurance Company

Surety: Blake S. Bohig, Attorney-in-Fact

(Affix Surety’s Corporate Seal)
CITY OF BOISE
SURETY'S BOND AFFIDAVIT

STATE OF Minnesota
COUNTY OF Hennepin

Before me the undersigned authority, personally appeared Blake S. Bohlig, who, being duly sworn deposes and says that he is a duly authorized (resident) (non-resident) insurance agent, properly licensed under the laws of the State of Minnesota, and the State of Idaho, to represent Liberty Mutual Insurance Company, a company authorized to make corporate surety bonds under the laws of the State of Idaho (the "Surety").

Said Blake S. Bohlig further certifies that as agent or attorney-in-fact for the said surety, he has signed the attached bond in the sum of Five Percent of Amount Bid ($ 5%) on behalf of Liberty Mutual Insurance Company.

To the City of Boise, Idaho covering FAA AIP Project No. 3-16-0003-073-2020, City Project No. F/B 19-10, Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways B and J at the Boise Airport.

Said Blake S. Bohlig further certifies that the premium on the said bond is $ 0.00 which will be paid in full directly to the surety or to him as agent or attorney-in-fact, and included in his regular commission as agent or attorney-in-fact, for the execution of said bond and that his commission will not be divided with anyone except to who is a duly authorized insurance agent properly licensed under the laws of the State of Idaho.

Countersigned:

Liberty Mutual Insurance Company
Surety

Address of Resident Agent
Non-Resident
8400 Normandale Lake Blvd., Suite 1700,
Bloomington, MN 55437

Address of Resident Agent
Non-Resident
175 Berkeley Street, Boston, MA 02116

Address of Bond Company

Blake S. Bohlig
Idaho Resident Agent
Non-Resident
763-302-7110
Phone Number
763-302-7200
Fax Number

Acknowledgement for Attorney-in-Fact:

Sworn to and Subscribed Before me this 25th Day of March, 2020.

Notary Public, State of Minnesota
My commission expires: 01/31/2021

KELLY NICHOLLE ENGAUER
Notary Public-Minnesota
My Commission Expires Jan 31, 2021

PROPOSAL FORMS
FEBRUARY 26, 2020
ISSUED FOR BID
This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8202635-190003

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Blake S. Bohle, Brian D. Carmer, Kelly Nicole Englehauser, Heather R. Goeddel, Michelle Halter, Jessica Hoff, Nicole Langer, Craig Olmstead, Laurie Piff.

all of the city of Bloomington state of Minnesota each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surely and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 21st day of November, 2019.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By:
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY

On this 21st day of November, 2019 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By:
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:


Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surely any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.


Any officer of the Company authorized for that purpose in writing by the Chairman or the President, and subject to such limitations as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surely any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surely any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Lewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of whichever of the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 25th day of March, 2020.

Renee C. Lewellyn, Assistant Secretary

LMS-128731LMC_OCIC_WAIC_MultiCo_062018
CITY OF BOISE

EQUAL EMPLOYMENT OPPORTUNITY REPORT STATEMENT
As required by 41 CFR 60-1.7(b)

Section 60-1.7(b) of the Regulations of the Secretary of Labor requires each bidder or prospective prime Contractor and proposed Subcontractor, where appropriate, to state in the bid or at the outset of negotiations for the Contract whether it has participated in any previous Contract or Subcontract subject to the equal opportunity clause; and if so, whether it has filed with the Joint Reporting Committee, the Director, an agency, or the former President’s Committee on Equal Employment Opportunity all reports due under the applicable filing requirements. In any case in which a bidder or prospective prime Contractor or proposed Subcontractor which participated in a previous Contract subject to Executive Order 10925, 11114, or 111246 has not filed a report due under the applicable filing documents, no Contract or Subcontract shall be awarded unless such Contractor submits a report covering the delinquent period or such other period specified by the FAA or the Director, OFCCP.

The Bidder (proposer) shall complete the following statement by checking the appropriate boxes. Failure to complete these blanks may be grounds for rejection of bid.

1. The Bidder (proposer) has (x) has not ( ) developed and has on file at each establishment Affirmative Action Programs pursuant to 41 CFR 60-1.4 and 41 CFR 60-2.

2. The Bidder (proposer) has (x) has not ( ) participated in any previous Contract or Subcontract subject to the Equal Opportunity Clause prescribed by Executive Order 10925, or Executive Order 11114, or Executive Order 11246.

3. The Bidder (proposer) has (x) has not ( ) filed with the Joint Reporting Committee the annual compliance report on Standard Form 100 (EEO-1 Report).

4. The Bidder (Proposer) has (x) has not ( ) submitted all compliance reports on connection with any such Contract due under the application filing requirements; and that representations indicating submission of required compliance reports signed by proposed Subcontractors will be obtained prior to award of Subcontractors.

5. The Bidder (Proposer) does (x) does not ( ) employ fifty (50) or more employees.

If the Bidder (Proposer) has participated in a previous Contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Bidder (Proposer) shall submit a compliance report on Standard From 100, "Employee Information EEO-1" prior to the award of Contract.
Standard Form 100 is normally furnished to Contractors annually, based on a mailing list currently maintained by the Joint Reporting Committee. In the event a Contractor has not received the form, he may obtain it by writing to the following address: Joint Reporting Committee, 1800 G Street, Washington, DC 20506

Knife River Corporation - Mountain West  
(Name of Bidder)

By:  

Title: Jesse Rosin - Authorized Agent  

Date: 3/25/2020

*Must be same signature on Bid Proposal
RESTRICTIONS ON FEDERAL PUBLIC WORKS PROJECTS

GENERAL: This clause implements provisions contained in the Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law No. 100-223.

RESTRICTIONS ON CONTRACT AWARD: No contract will be awarded to a bidder (1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms, published by the United States Trade Representative (USTR) or (2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or (3) who incorporates in the project any product of a foreign country on such USTR list; unless a waiver to these restrictions is granted by the President of the United States or the Secretary of Transportation. (Notice of the granting of a waiver will be published in the Federal Register.) The USTR list currently contains the following country: Japan

CERTIFICATION: By signing this page the bidder certifies that with respect to this solicitation, and any resultant contract the bidder:

1. is _____ is not _____ a contractor of a foreign country included on the USTR list;
2. has _____ has not _____ entered into any contract with a subcontractor of a foreign country included on the USTR list;
3. has _____ has not _____ entered into any contract for any product to be used on this project that is produced in a foreign country included on the USTR list.

The bidder may rely upon the certification of a prospective subcontractor for the above conditions, unless the bidder has knowledge that the certification is erroneous.

ERRORNEOUS CERTIFICATION: This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the bidder knowingly rendered an erroneous certification, the sponsor may cancel this contract for default at no cost to the sponsor.

SUBCONTRACTS: The bidder shall incorporate this clause, without modification, including this paragraph (f) in all solicitations and subcontracts under this contract.

APPLICABILITY OF 18 U.S.C. 1001: This certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

Signature 3/25/2020

Date
NOTICE TO BIDDERS

BUY AMERICAN — STEEL AND MANUFACTURED PRODUCTS FOR CONSTRUCTION CONTRACTS (JAN 1991)

A. The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program. The following terms apply:

1. Steel and manufactured products. As used in this clause, steel and manufactured products include (1) steel produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs (b) (1) or (2) shall be treated as domestic.

2. Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.

3. Cost of components. This means the costs for production of the components, exclusive of final assembly labor costs.

B. The successful bidder will be required to assure that only domestic steel and manufactured products will be used by the Contractor, subcontracts, materialmen, and suppliers in the performance of this contract, except those-

1. that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality;

2. that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or

3. that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.
BUY AMERICAN CERTIFICATE (JAN 1991)

By submitting a bid/proposal under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment to this bid/proposal, the offeror certifies that steel and each manufactured product, is produced in the United States (as defined in the clause Buy American - Steel and Manufactured Products or Buy American - Steel and Manufactured Products for Construction Contracts) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

Offerors may obtain from the City of Boise lists of articles, materials, and supplies excepted from this provision.

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>COUNTRY OF ORIGIN</th>
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3/25/2020
Date
CITY OF BOISE

CERTIFICATION OF NONSEGREGATED FACILITIES

The Federally-assisted construction contractor certifies that he will not maintain or provide, for his employees, any segregated facilities at any of his establishments and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Federally-assisted construction Contractor certifies that he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in his contract.

As used in this certification, the term 'segregated facilities' means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated on a basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The Federally-assisted construction contractor agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that he will retain such certifications in his files.

NOTICE TO PROSPECTIVE FEDERALLY ASSISTED CONSTRUCTION CONTRACTORS - 41 CFR60-1.8 (VERSION 1, 5/1/80)

1. A Certification of Nonsegregated Facilities shall be submitted prior to the award of a subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

2. Contractors receiving Federally-assisted construction contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATION OF NONSEGREGATED FACILITIES

1. A Certification of Nonsegregated Facilities shall be submitted prior to the award of a Federally-assisted construction contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

2. Contractors receiving subcontract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

Certification-The information above is true and complete to the best of my knowledge and belief.

Jessee Rosin
Name of Signer

[Signature]
Signature of Contractor

Authorized Agent
Title

3/25/2020
Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.
THIS PAGE INTENTIONALLY BLANK
CERTIFICATION REGARDING DEBAREMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

The bidder/offeror certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the bidder/offeror/contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

Certification — The information above is true and complete to the best of my knowledge and belief.

Jesse Rosin  
Name of Signer  

Authorized Agent  
Title  

Signature of Contractor  

3/25/2020  
Date  

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.
DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The City of Boise, Idaho (Owner) in accordance with Title VI Civil Rights Act of 1964, 78 Stat. 262, 42 USC and 49 CFR, Part 21 issued pursuant to such Act, affords Disadvantage Business Enterprises full opportunity to submit an indication of interest in response to this invitation and will not discriminate against any interested firm on the ground of race, creed, color, sex, age or national origin in a contract award. In addition, the Owner has established goals for DBE participation in Owner projects. Contact City of Boise for the DBE policy for the City of Boise. Refer to IB-14 for other DBE information.

A. The undersigned bidder/offeror has satisfied the requirements of the bid specification in the following manner (please check the appropriate space):

☐ bidder/offeror is committed to a minimum of % DBE utilization on this contract.

Name of bidder/offeror's firm: Knife River Corporation - Mountain West

Signature

5450 W Gowen Road, Boise, ID 83709

Address

Jesse Rosin - Authorized Agent
Title

(208) 362-6152
Phone
<table>
<thead>
<tr>
<th>CITY OF BOISE</th>
<th>P-38</th>
<th>PROPOSAL FORMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOISE AIRPORT</td>
<td></td>
<td>FEBRUARY 26, 2020</td>
</tr>
<tr>
<td>REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B</td>
<td></td>
<td>ISSUED FOR BID</td>
</tr>
</tbody>
</table>

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All firms bidding or quoting on subcontracts for this DOT-assisted project are listed below:

<table>
<thead>
<tr>
<th>FIRM NAME</th>
<th>ADDRESS</th>
<th>CERTIFIED DBE (Y or N)</th>
<th>AGE OF FIRM</th>
<th>GRS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syman</td>
<td>2101 Delta Drive, Nampa, ID 83687</td>
<td>N</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>452 N Locust Grove Rd, Meridian, ID 83642</td>
<td>N</td>
<td>30+</td>
<td>5</td>
</tr>
<tr>
<td>HD Fowler</td>
<td>123 S Baltic Place, Meridian, ID 83642</td>
<td>N</td>
<td>30+</td>
<td>5</td>
</tr>
<tr>
<td>J.E.C LLC</td>
<td>P.O. Box 1512, Meridian, ID 83642</td>
<td>N</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>United Safety Systems</td>
<td>1712 Pioneer Ave, Suite 1182, Cheyenne, WY 82001</td>
<td>N</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Porter W. Yett Co.</td>
<td>125 N Park Road, Spokane Valley, WA 99212</td>
<td>N</td>
<td>45</td>
<td>2</td>
</tr>
<tr>
<td>B. Jackson</td>
<td>4188 West Nike Drive, West Jordan, UT 84088</td>
<td>N</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Curtis Clean Sweep</td>
<td>P.O. Box 44112, Boise, ID 83711</td>
<td>Y</td>
<td>62</td>
<td>3</td>
</tr>
<tr>
<td>Specialty Construction Supply</td>
<td>348 Northwest 13th Place, Meridian, ID 83642</td>
<td>N</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>Northwest Linings &amp; Geotextile</td>
<td>20824 77th Avenue South, Kent, WA 98032</td>
<td>N</td>
<td>47</td>
<td>5</td>
</tr>
<tr>
<td>Mountain West Electric</td>
<td>586 West Hwy 26, Blackfoot, ID 83221</td>
<td>N</td>
<td>36</td>
<td>5</td>
</tr>
<tr>
<td>Hanes Geo Components</td>
<td>5900 NE 88th St, Suite 111, Vancouver, WA 98665</td>
<td>N</td>
<td>40+</td>
<td>5</td>
</tr>
<tr>
<td>Idaho Traffic Control</td>
<td>19032 Red Top Road, Caldwell, ID 83607</td>
<td>Y</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Oldcastle Infrastructure</td>
<td>16419 Ten Lane, Nampa, ID 83687</td>
<td>N</td>
<td>50+</td>
<td>5</td>
</tr>
<tr>
<td>Idaho Lines &amp; Signs</td>
<td>4850 Henry Street, Suite B, Boise, ID 83709</td>
<td>N</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

*GRS - Annual Gross Receipts

Enter 1 for less than $1 million
Enter 2 for more than $1 million, less than $5 million
Enter 3 for more than $5 million, less than $10 million
Enter 4 for more than $10 million, less than $15 million
Enter 5 for more than $15 million.
All firms bidding or quoting on subcontracts for this DOT-assisted project are listed below:

<table>
<thead>
<tr>
<th>FIRM NAME</th>
<th>ADDRESS</th>
<th>CERTIFIED DBE (Y or N)</th>
<th>AGE OF FIRM</th>
<th>GRS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Core Inc.</td>
<td>6531 Business Way, Boise, ID 83716</td>
<td>N</td>
<td>36</td>
<td>2</td>
</tr>
<tr>
<td>Western Construction Inc</td>
<td>10139 S. Federal Way, Boise, ID 83715</td>
<td>N</td>
<td>40+</td>
<td>5</td>
</tr>
<tr>
<td>CoVico Inc</td>
<td>2812 N Pittsburg, Spokane, WA 99207</td>
<td>N</td>
<td>33</td>
<td>5</td>
</tr>
</tbody>
</table>

*GRS - Annual Gross Receipts

Enter 1 for less than $1 million
Enter 2 for more than $1 million, less than $5 million
Enter 3 for more than $5 million, less than $10 million
Enter 4 for more than $10 million, less than $15 million
Enter 5 for more than $15 million.
### CONTRACTORS INFORMATION FORM

THIS FORM IS REQUIRED TO BE COMPLETED BY ALL PRIME CONTRACTORS

**Contractor:** Knife River Corporation - Mountain West  
**Project #:** Realignment of Taxiway H & Mill/Overlay Taxiway J&B

**Signature of Preparer:** [Signature]

**Date:** 3/25/2020

<table>
<thead>
<tr>
<th>Name, City, Phone of Subcontractor</th>
<th>DBE?</th>
<th>Items Quoted</th>
<th>Amount Quoted</th>
<th>Commit to use</th>
<th>If DBE not selected, why?</th>
<th>Information provided to subcontractor (i.e. plans, specs)</th>
<th>Date &amp; method of contact</th>
<th>Assistance with line of credit/bonding?</th>
<th>Other Assistance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syman Nampa, ID 83687 (208) 287-8420</td>
<td>x</td>
<td>Erosion Control</td>
<td>$8,529.00</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/12/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Ferguson Waterworks Meridian, ID 83642 (208) 855-2040</td>
<td>x</td>
<td>Fabric and Pipe</td>
<td>$21,334.34</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/18/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>HD Fowler Meridian, ID 83642 (208) 629-5366</td>
<td>x</td>
<td>Pipe Supplier</td>
<td>$11,678.66</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/23/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>J.E.G. LLC Meridian, ID 83642 (208) 340-2836</td>
<td>x</td>
<td>Erosion Control</td>
<td>$2,850.00</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/23/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>United Safety System Cheyenne, WY 82001 (307) 689-5080</td>
<td>x</td>
<td>Airport Product Supplier</td>
<td>tbd</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>POWHRC, Inc. Company</td>
<td>Spokane Valley, WA (509) 928-4769</td>
<td>x</td>
<td>Milling</td>
<td>$36,802.00</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>N</td>
</tr>
<tr>
<td>J.B. Bard Construction West Jordan, UT (801) 260-0988</td>
<td>x</td>
<td>Milling</td>
<td>$54,565.00</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Curtis Clean Sweep Boise, ID (208) 343-7600</td>
<td>x</td>
<td>Pavement Markings</td>
<td>$52,897.50</td>
<td>tbd</td>
<td>tbd</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Specialty Cones Supply Meridian, ID 83642 (208) 322-6800</td>
<td>x</td>
<td>Traffic Control</td>
<td>$112,300.00</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Northwest Lining &amp; Geol Kant, WA 98032 (253) 672-0244</td>
<td>x</td>
<td>Geotextile</td>
<td>$11,250.00</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Mountain West Electric Blackfoot, ID 83221 (208) 884-5463</td>
<td>x</td>
<td>Electrical</td>
<td>$843,300.00</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Ranas Geo Components Vancouver, WA 98665 (602) 426-7796</td>
<td>x</td>
<td>Geotextile</td>
<td>$12,750.00</td>
<td>N</td>
<td>n/a</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

**CITY OF BOISE**  
**BOISE AIRPORT**  
**REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J AND B**

**P-41**  
**PROPOSAL FORMS**  
**FEBRUARY 26, 2020**  
**ISSUED FOR BID**

## CONTRACTORS INFORMATION FORM

THIS FORM IS REQUIRED TO BE COMPLETED BY ALL PRIME CONTRACTORS

**Contractor:** Knife River Corporation - Mountain West

**Project #:** Realignment of Taxiway H & Mill/Overlay Taxiway J&B

**Signature of Preparer:**

**Date:** 3/25/2020

<table>
<thead>
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<th>Commit to use</th>
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<th>Date &amp; method of contact</th>
<th>Assistance with line of credit/bonding?</th>
<th>Other Assistance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idaho Traffic Control</td>
<td>x</td>
<td>Traffic Control</td>
<td>tbd-hourly rates</td>
<td>tbd</td>
<td>tbd based on hourly rates and if low quote.</td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Caldwell, ID (208) 455-3220</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Castle Infrastructure</td>
<td>x</td>
<td>Pipe Supplier</td>
<td>$75,375.00</td>
<td>x</td>
<td></td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
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<td></td>
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<tr>
<td>Nampa, ID 83687 (208) 455-0178</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Idaho Line &amp; Signs</td>
<td>x</td>
<td>Pavement Markings</td>
<td>$42,824.50</td>
<td>x</td>
<td></td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Boise, ID 83709 (208) 319-7200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-Care, Inc.</td>
<td>x</td>
<td>Saw Cutting</td>
<td>$43,129.90</td>
<td>x</td>
<td></td>
<td>Plans &amp; Specs</td>
<td>Email, 3/24/2020</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Boise, ID 83716 (208) 384-0500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western Construction, Inc</td>
<td>x</td>
<td>Milling</td>
<td>$38,105.00</td>
<td>x</td>
<td></td>
<td>Plans &amp; Specs</td>
<td>Email, 3/25/2020</td>
<td>x</td>
<td></td>
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<tr>
<td>Boise, ID 83715 (208) 345-1440</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colvico Inc</td>
<td>x</td>
<td>Electrical</td>
<td>$419,875.00</td>
<td>x</td>
<td></td>
<td>Plans &amp; Specs</td>
<td>Email, 3/25/2020</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Spokane, WA 99207 (509) 262-5817</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DBE LETTER OF INTENT

Name of bidder/offeror's firm: □ / □
Address: ______________________________
City: __________________ State: __________ Zip: __________

Name of DBE firm: ______________________________
Address: ______________________________
City: __________________ State: __________ Zip: __________
Telephone: ______________________________

Description of work to be performed by DBE firm:

"NONE SELECTED AT TIME OF BID"

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated dollar value of this work is $______________.

AFFIRMATION

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

□ / □
Signature

□ / □
Title

If the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.
CITY OF BOISE
NON-COLLUSION AFFIDAVIT

STATE OF IDAHO
COUNTY OF Ada

Jesse Rosin, being first duly sworn, deposes and says that:

1. He/She is an Authorized Agent of Knife River Corporation - Mountain West, the Bidder that has submitted the attached bid;
2. He/She is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such bid;
3. Such bid is genuine and is not a collusive or sham bid;
4. Neither the Bidder nor anyone acting on behalf of the Bidder, including the affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Boise, Idaho or any person interested in the proposed Contract; and,
5. The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the bidder or anyone acting on his/her behalf.

Signature

Jesse Rosin - Authorized Agent

Title

Subscribed and Sworn to before me on this 25th day of March, 2020.

Nichole Ruwe
Notary's Signature

Nichole Ruwe
Notary's Printed Name

Notary Public, in and for Ada County,
My commission expires: 3/24/2023
CONTRACTOR'S AFFIDAVIT CONCERNING TAXES

STATE OF IDAHO

COUNTY OF Ada

Pursuant to the Idaho Code, Title 63, Chapter 15, I, undersigned, being duly sworn, depose and certify that all taxes, excises, and license fees due to the State of Idaho and its taxing units, for which I or my property is liable, then due or delinquent, have been paid, or arrangements have been made, before entering into a contract for construction of any public works in the State of Idaho.

Knife River Corporation - Mountain West
Name of Contractor

5450 W Gowen Road
Address

Boise, ID 83709
City and State

Authorized Representative

Subscribed and Sworn to before me on this 25th day of March, 2020.

Nichole Ruwe
Notary Public, residing at Boise, ID

My commission expires

END OF CONTRACTOR'S AFFIDAVIT CONCERNING TAXES
EQUAL OR EQUIVALENT REQUESTS

These specifications are given as guidelines. Vendors are encouraged to propose equals or equivalents that meet or exceed the quality, performance and use of the brand, model or specification in this Bid. It is not the intention of the specifications to restrict the competitive bid process, nor to direct the Bidder to a specific make, model, or brand, unless there is a specific requirement by the City, in which case, that will be so stated within this Bid.

The City of Boise reserves the right to contact the Bidder for a clarification of any deviation from the specifications. Failure to submit an Equal or Equivalent Request Form for an apparent deviation from a specification may lead to the rejection of the entire bid by the City.

The burden of proof is on the requestor, make sure that you supply complete information for the City to evaluate your request. The determination of what is an acceptable equal or equivalent rests entirely with Boise City. Please include marketing brochures of the proposed equals or equivalents.

Equal or equivalent requests may be received prior to the bid opening:

It is highly recommended that the Bidder submit the Equal or Equivalent Request Form prior to the time and date set for the bid opening. Forms submitted prior to the bid opening must be received in the Purchasing office no later than _____________, 2020.

The City will review the request and respond to the Bidder prior to bid opening regarding its acceptance or rejection of the equal or equivalent request.

Equal or equivalent requests received with the bid or proposal:

The City will review the equal or equivalent request of the apparent low Bidder and respond to the Bidder regarding its acceptance or rejection of the request.

If the equal or equivalent request is included with the bid, the Bidder assumes the risk of the request being unacceptable to the City, at which point the bid will be rejected and deemed non-responsive.

Equal or equivalent request forms will not be accepted after the time and date set forth for the opening of this bid.
EQUAL, APPROVED EQUAL, OR EQUIVALENT REQUEST FORM

TO: Boise City Division of Purchasing, 150 N. Capitol Boulevard, Boise, ID 83702

PROJECT: Boise Airport, FAA AIP Project No. 3-16-0003-073-2020 City Project No. F/B 20-207
Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B

We hereby submit for your consideration the following product instead of the specified item for the above project:

<table>
<thead>
<tr>
<th>Specification #</th>
<th>Proposed &quot;Or-Equal&quot; Product</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attach complete technical data, including laboratory tests, if applicable.

Differences between "Or-Equal" request and specified item:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

What affect does "Or-Equal" request have on the use of the product?

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Manufacturer's guarantees of the proposed and specific items are:

_____ Same _____ Different (Explain on an attached sheet of paper)

The undersigned certifies that the function, appearance, and quality of the "or-equal" products are equivalent or superior to the specified product.

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

ACTION TAKEN BY BOISE CITY:

_____ Accepted
_____ Not Accepted
_____ Accepted as noted
_____ Received too late

By: _______________________

Date: _____________________

Remarks: ___________________

***Submit six (6) business days prior to bid opening***
FAA REQUIRED CONTRACT PROVISIONS

These provisions are hereby made part of this contract, as required.

1. ACCESS TO RECORDS AND REPORTS

ACCESS TO RECORDS AND REPORTS

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

2.AFFIRMATIVE ACTION REQUIREMENT
   (Reference: 41 CFR part 60-4, Executive Order 11246)

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

   A. Timetables
   B. Goals for minority participation for each trade (2.8%)
   C. Goals for female participation in each trade (6.9%)

These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor is also subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause; specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training shall be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project, for the sole purpose of meeting the contractor's goals, shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs (OFCCP), within 10 working days of award of any construction subcontract in excess of $10,000
at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" Lane, Douglas, Linn and Benton Counties.

3. **BREACH OF CONTRACT TERMS**  
*(Reference 2 CFR § 200 Appendix II(A))*

**BREACH OF CONTRACT TERMS**

Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the Contractor must correct the breach. Owner may proceed with termination of the contract if the Contractor fails to correct the breach by deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.
4. **BUY AMERICAN PREFERENCE**  
*(Reference: 49 USC § 50101)*

**BUY AMERICAN CERTIFICATION**

The contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP-funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Exception Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or Offeror must complete and submit the Buy America certification included herein with their bid or offers. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance.

**Certificate of Buy American Compliance for Manufactured Products**

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

- [x] Bidder or Offeror hereby certifies that it will comply with 49 USC § 50101 by:
  - a) Only installing steel and manufactured products produced in the United States, or;
  - b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;
  - c) Installing products listed as an Exception Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

  By selecting this certification statement, the bidder or Offeror agrees:
  1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
  2. To faithfully comply with providing US domestic product
  3. To furnish US domestic product for any waiver request that the FAA rejects
  4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

- [ ] The bidder or Offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or Offeror with the apparent low bid agrees:
  1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.
  2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
  3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
  4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

**Required Documentation**
Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more that 60% of the cost of all components and subcomponents of the "item". The required documentation for a type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety)

b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.

c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

a) Detailed cost information for total project using US domestic product

b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

3/25/2020
Date

Signature

Knife River Corporation - Mountain West
Company Name

Jesse Rosin - Authorized Agent
Title

CITY OF BOISE
BOISE AIRPORT
REALIGNMENT OF TAXIWAY H AND
MILLOVERLAY OF PORTIONS OF TAXIWAYS J AND B
5. **CIVIL RIGHTS - GENERAL**  
(Reference: 49 USC § 47123)

**GENERAL CIVIL RIGHTS PROVISIONS**

The contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the contractors and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

6. **CIVIL RIGHTS – TITLE VI ASSURANCES**  
(Reference: 49 USC § 47123, FAA Order 1400.11)

**Title VI Clauses for Compliance with Nondiscrimination Requirements:**

**Compliance with Nondiscrimination Requirements**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Statutes and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

   a. Withholding payments to the contractor under the contract until the contractor complies; and/or

   b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

**Title VI List of Pertinent Nondiscrimination Acts and Authorities**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);

- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);


- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);

- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
• Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

• The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

• Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

• Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

• Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

7. **CLEAN AIR AND WATER POLLUTION CONTROL**
   *(Reference: 2 CFR § 200, Appendix II(G))*

**CLEAN AIR AND WATER POLLUTION CONTROL**

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds $150,000.

8. **CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS**
   *(Reference: 2 CFR § 200 Appendix II (E))*

**CONTRACT WORK HOURS AND SAFETY STANDARDS ACT REQUIREMENTS**

1. Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.
4.B.1.d

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In the event of any violation of the clause set forth in paragraph (1) of this clause, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this clause.

4. Subcontractors.

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

9. **COPELAND “ANTI-KICKBACK” ACT**

*(Reference: 2 CFR § 200 Appendix II(D), 29 CFR parts 3 & 5)*

**COPELAND “ANTI-KICKBACK” ACT**

Contractor must comply with the requirements of the Copeland “Anti-Kickback” Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

10. **DAVIS-BACON REQUIREMENTS**

*(Reference: 2 CFR § 200 Appendix II(D), 29 CFR Part 5)*

**DAVIS-BACON REQUIREMENTS**

1. Minimum Wages

   (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of
payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates confirmed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding.

The Federal Aviation Administration or the sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals.
Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;

(2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.
(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeymen's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a
training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements.

The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.


The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.


A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.


Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).


11. DEBARMENT AND SUSPENSION (NON-PROCUREMENT)

(Reference: 2 CFR part 180 (Subpart C), 2 CFR part 1200, DOT Order 4200.5)

CERTIFICATE OF OFFERER/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.
CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

12. DISADVANTAGED BUSINESS ENTERPRISE
(Reference: 49 CFR part 26)

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§ 26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than {specify number} days from the receipt of each payment the prime contractor receives from (Name of recipient). The prime contractor agrees further to return retainage payments to each subcontractor within {specify the same number as above} days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the {Name of Recipient}. This clause applies to both DBE and non-DBE subcontractors.

13. DISTRACTED DRIVING
(Reference: Executive Order 13513, DOT Order 3902.10)

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 and involve driving a motor vehicle in performance of work activities associated with the project.
14. ENERGY CONSERVATION REQUIREMENTS
(Reference: 2 CFR § 200 Appendix II(H))

ENERGY CONSERVATION REQUIREMENTS

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq).

15. EQUAL OPPORTUNITY CLAUSE AND SPECIFICATIONS
(Reference: 2 CFR 200, Appendix II(C), 41 CFR § 60-1.4, 41 CFR § 60-4.3, Executive Order 11246)

EQUAL OPPORTUNITY CLAUSE

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules,
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regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with regard to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including the United States: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS

1. As used in these specifications:
   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
   b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
   c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
   d. "Minority" includes:
      (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
      (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
      (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to Contract goals and timetables.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted
are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and
trainee programs relevant to the contractor’s employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the contractor’s EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company’s EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor’s EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor’s EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor’s recruitment area and employment needs. No later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor’s workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor’s obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
p. Conduct a review, at least annually, of all supervisor’s adherence to and performance under the contractor’s EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor’s minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor’s and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program)
16. FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)
(Reference: 29 USC § 201, et seq.)

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers.

The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES
(Reference: 31 USC § 1352 – Byrd Anti-Lobbying Amendment, 2 CFR part 200, Appendix II(J), 49 CFR part 20, Appendix A)

CERTIFICATION REGARDING LOBBYING

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.
17. PROHIBITION OF SEGREGATED FACILITIES
(Reference: 41 CFR § 60)

PROHIBITION OF SEGREGATED FACILITIES

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

18. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970
(Reference: 20 CFR part 1910)

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

19. PROCUREMENT OF RECOVERED MATERIALS
(Reference: 2 CFR § 200.322, 40 CFR part 247)

PROCUREMENT OF RECOVERED MATERIALS

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

a) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or,

b) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/epawaste/conserve/tools/cpg/products/.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:
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a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;

b) Fails to meet reasonable contract performance requirements; or

c) Is only available at an unreasonable price.

20. **RIGHT TO INVENTIONS**

(Reference: 2 CFR § 200 Appendix II(F), 37 CFR §401)

**RIGHTS TO INVENTIONS**

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within the 37 CFR §401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental or research work.

21. **TERMINATION OF CONTRACT**

(Reference: 2 CFR § 200 Appendix II(B), FAA Advisory Circular 150/5370-10, Section 80-09)

**TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)**

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

c) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;

d) documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;

e) reasonable and substantiated claims, costs and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and

f) reasonable and substantiated expenses to the contractor directly attributable to Owner's termination action.
Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

22. TRADE RESTRICTION
(Reference: 49 USC § 50104, 49 CFR part 30)

TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror-

a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);

b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R.; and

c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

(1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or

(2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or

(3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has knowledge that the certification is erroneous.
This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

23. VETERAN'S PREFERENCE
(Reference: 49 USC § 47112(c))

VETERAN'S PREFERENCE

In the employment of labor (excluding executive, administrative, and supervisory positions), the contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

24. TAX DELINQUENCY AND FELONY CONVICTION
(Reference: Sections 415 and 416 of Title IV, Division L of the Consolidated Appropriations Act, 2014 (Pub. L. 113-76); DOT Order 4200.6)

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

a) The applicant represents that it is ( ) is not (✓) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

b) The applicant represents that it is ( ) is not (✓) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies...
the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

**Tax Delinquency**: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
NOTICE TO PROCEED

TO: CONTRACTOR NAME
CONTRACTOR ADDRESS
CITY, STATE ZIP

DATE: _________________________

PROJECT: Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways B and J
FAA AIP Project No. 3-16-0003-073-2020
City Project No. F/B 20-207

Effective ________, CONTRACTOR, is hereby authorized to proceed on the subject project, in accordance with the Agreement dated _______________________.

The City of Boise

BY: __________________________
Name

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE **CONTRACTOR** of the State of **CONTRACTOR STATE** and County of **CONTRACTOR COUNTY** hereinafter, known as the Principal, and a corporation chartered and existing under the laws of the State of **CONTRACTOR STATE** and duly authorized to business in the State of Idaho as Surety, are held and firmly bound unto the City of Boise, Idaho hereinafter known as the Owner, in the penal sum of **PROJECT COST** being 100% of the contract price to be paid to the Owner, for the use and benefit of all persons doing work or furnishing skill, tools, machinery or materials, or subcontracting under or for the purpose of the hereinafter named contract, for which payment, well and truly to be made, we hereby bind ourselves, our heirs, executors, administrators, successors and assignees, jointly and severally, by these presents.

This obligation is, however, subject to the following conditions:

The above bound Principal has entered into a contract with the Owner under which it agrees to furnish all the labor and material and do all work necessary to construct all improvements described in these contract documents under certain terms, conditions, and stipulations and in accordance with the plans and specifications for the project, which are hereto attached and made a part of this obligation.

NOW, THEREFORE, the conditions of this obligation are such that is the above bound Principal shall faithfully and fully carry out and comply with the terms and conditions of said contract, in complete the work therein specified and in the event Contractor fails to perform, it shall be the duty of the Surety herein to assume the responsibility for the performance of the contract and to complete the work specified therein, including, but not limited to, obligations created by way of warranties and/or guarantees for workmanship and materials which warranty and/or guarantee may extend for a period of time beyond completion of said contract, and such alterations or additions as may be made therein or in the plans and specifications, and shall indemnify and save the Engineer and the Owner harmless against any claims for using any form of material process, composition or anything which is patented, and likewise indemnify and save the Engineer and the Owner harmless against all claims for damages by reason of any default or negligence, want of skill or care on the part of said Principal or Agents in and about the performance of said contract, and shall comply with all laws pertaining to said work, and shall comply with and perform any and all warranties and/or guarantees provided for in said contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

And the Surety to this bond, for value received agrees that no change, extensions of time, alterations or additions to the terms of the contract or to the work to be performed thereunder of the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alterations or additions to the terms of the Contract or the work or to the Plans and Specifications.

Said Principal and Surety hereby for themselves and their families waive and renounce the benefit of all homestead and exemption laws of this or any other state or the laws of the United States, as against any claim or judgment based upon the obligations of this bond.

It is agreed that this bond is executed pursuant to and in accordance with the provisions of the Idaho Statutes, and is intended to be and shall be construed to be a bond on compliance with the requirements thereof, except and to the extent that this bond provides Owner with greater or additional rights than those set forth in the Idaho Statutes. The payment bond required to exempt an Owner under this part shall be furnished by the Contractor in at least the amount of the original contract price before commencing the construction of the improvement under the direct contract. The bond shall be executed as surety by a surety insurer authorized to do business in this state and shall be conditioned that the Contractor shall promptly make payments for labor, services, and material to all lienors under the Contractor's direct contract. Any form of bond given by a Contractor conditioned to pay for labor, services, and material used to improve real property shall be deemed to include the condition of this subsection.
IN WITNESS WHEREOF, said Principal and Surety have thereunto affixed their hands and seals on this _______ day of __________, 20__, either in person or by agents fully authorized.

As to Principal:

Signed, sealed and delivered in the presence of:

________________________________________
Principal

Witness

________________________________________
Notary Public

State of _____________________________
County of ____________________________

As to Surety:

Signed, sealed and delivered in the presence of:

________________________________________
Surety

Witness

________________________________________
Notary Public

State of _____________________________
County of ____________________________

Approved as to form:

________________________________________
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE CONTRACTOR of the State of CONTRACTOR STATE and County of CONTRACTOR COUNTY hereinafter, known as the Principal, and ________________, a corporation chartered and existing under the laws of the State of ________________, and duly authorized to business in the State of Idaho as Surety, are held and firmly bound unto the City of Boise, Idaho hereinafter known as the Owner, in the penal sum of PROJECT COST being 100% of the contract price to be paid to the Owner, for the use and benefit of all persons doing work or furnishing skill, tools, machinery or materials, or subcontracting under or for the purpose of the hereinafter named contract, for which payment, well and truly to be made, we hereby bind ourselves, our heirs, executors, administrators, successors and assignees, jointly and severally, by these presents.

This obligation is, however, subject to the following conditions:

The above bound Principal has entered into a contract with the Owner under which agrees to furnish all the labor and material and do all work necessary to construct all improvements described in these contract documents under certain terms, conditions, and stipulations and in accordance with the plans and specifications for the project, which are hereto attached and made a part of this obligation.

NOW should the above named Principal and all subcontractors, if any, to whom any portion of the work provided for in the attached contract is sublet and all assignees of the said Principal and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, materials, or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension of or addition to said contract, and for the payment of reasonable attorneys fees, incurred by the claimant or claimants in suits on said bond, then the above obligation shall be void; otherwise, to remain in full force and effect.

And the Surety to this bond, for value received agrees that no change, extensions of time, alterations or additions to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations or additions to the terms of the Contract or the work to the Plans and Specifications.

Said Principal and Surety hereby for themselves and their families waive and renounce the benefit of all homestead and exemption laws of this or any other state or the laws of the United States, as against any claim or judgment based upon the obligations of this bond.

It is agreed that this bond is executed pursuant to and in accordance with the provisions of the Idaho Statutes, and is intended to be and shall be construed to be a bond on compliance with the requirements thereof. The payment bond required to exempt an Owner under this part shall be furnished by the Contractor in at least the amount of the original contract price before commencing the construction of the improvement under the direct contract. The bond shall be executed as surety by a surety insurer authorized to do business in this state and shall be conditioned that the Contractor shall promptly make payments for labor, services, and material to all lienors under the Contractor's direct contract. Any form of bond given by a Contractor conditioned to pay for labor, services, and material used to improve real property shall be deemed to include the condition of this subsection.
IN WITNESS WHEREOF, said Principal and Surety have thereunto affixed their hands and seals on this _______ day of _____________, 20__________, either in person or by agents fully authorized.

As to Principal:
Signed, sealed and delivered in the presence of:

__________________________________________
Principal

__________________________________________
Witness

__________________________________________
Notary Public

State of ________________________________

County of ________________________________

As to Surety:
Signed, sealed and delivered in the presence of:

__________________________________________
Surety

__________________________________________
Witness

__________________________________________
Notary Public

State of ________________________________

County of ________________________________

Approved as to form:

Owner’s Attorney
FINAL RELEASE OF LIEN

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned, for and in consideration of the payment of the sum of _______________________, Dollars ($_________________), paid by the City of Boise, Idaho hereinafter referred to as "Owner", receipt of which is hereby acknowledged as total compensation for performance of the below-described Contract for Bid Schedule(s) ________, does hereby fully and completely discharge and release the Owner from and waives any and all debts, accounts, promises, damages, liens, encumbrances, causes of action, suits, bonds, judgments, claims and demands whatsoever, in law or in equity, which the undersigned ever had, now has or might hereafter have on account of labor performed, material furnished or services rendered, directly or indirectly, for the Contract between the parties dated ____________, 20 ____, known as ________, except for those claims, disputes and other matters arising out of or relating to said Contract which have been raised by written demand in accordance with the Contract Documents prior to this date and identified by the Contractor as unsettled in the final Application for Payment and are either in arbitration or court litigation, as the case may be, in accordance with the Contract Documents.

The undersigned further covenants that subcontractors, suppliers, and material suppliers, and any or all other persons supplying materials, supplies, service or labor used directly or indirectly in the prosecution of the work provided for in the Contract, have been paid in full for all work under this contract.

The undersigned agrees to maintain in full force and effect the provisions of the Contract Documents respecting the guaranty against defective work, and any other special guaranties required by the Contract Documents, for the terms provided in the Contract Documents, which terms shall begin to run from the date specified in the Contract Documents.

The undersigned represents and warrants that the statements contained in the foregoing Release are true and correct.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this ___ day of ____________, 20 ___.

WITNESSES:

________________________

CONTRACTOR

By: ______________________

________________________

TITLE:

STATE OF ____________________

COUNTY OF ____________________

Sworn to and subscribed before me this ___ day of ____________, 20 ___.

(NOTARY SEAL)

________________________

NOTARY PUBLIC

My Commission Expires:
CERTIFICATE

I, Karl A. Liepitz, hereby certify that I am the duly elected and qualified Assistant Secretary of Knife River Corporation – Mountain West, a Delaware corporation; and I further certify that, pursuant to a resolution adopted by Written Consent of the Board of Directors dated May 22, 2019, the persons named below have been duly elected, have qualified and are officers of the Company holding the offices set forth opposite their respective names:

David C. Barney
Zachary W. O’Kelley
Nancy K. Christenson
Daniel S. Kuntz
Calvin R. DeWall
Karl A. Liepitz

Chair of the Board and Chief Executive Officer
President
Treasurer and Chief Financial Officer
General Counsel and Secretary
Region Controller and Assistant Secretary
Assistant Secretary

* * * * * * * * *

I further certify that the following is a true and correct copy of Section 5.13 of the Bylaws of Knife River Corporation – Mountain West, which sets forth the powers of the officers to execute documents; and that said Bylaw Section is presently in full force and effect:

5.13 Execution of Instruments. All deeds, bonds, mortgages, notes, contracts and other instruments shall be executed on behalf of the Corporation by the Chairman of the Board, the Chief Executive Officer, the President, any Vice President or Assistant Vice President, the General Counsel, any other officer who performs a policy-making function (such as administration, operations, accounting, or finance) or such other officer or agent of the Corporation as shall be duly authorized by the Board of Directors. Any officer or agent executing any such documents on behalf of the Corporation may do so (except as otherwise required by applicable law) either under or without the seal of the Corporation and either individually or with an attestation, according to the requirements of the form of the instrument. If an attestation is required, the document shall be attested by the Secretary or an Assistant Secretary or by the Treasurer or an Assistant Treasurer or any other officer or agent authorized by the Board of Directors. When authorized by the Board of Directors, the signature of any officer or agent of the Corporation may be a facsimile.

IN WITNESS WHEREOF, I have hereunto set my hand on October 23, 2019.

Karl A. Liepitz, Assistant Secretary
March 14, 2018

Re: Appointment of Agents - Power of Attorney

To Whom It May Concern:

Pursuant to a Board resolution adopted by the Board of Directors of Knife River Corporation – Mountain West, I am authorized, as President, to designate certain individuals as agents of Knife River Corporation – Mountain West who shall be authorized, in the name and on behalf of Knife River Corporation – Mountain West, to execute and deliver construction contracts, subcontracts, agreements, documents, and other instruments with governmental authorities (federal, state, county, or local), with general contractors or subcontractors, and with private parties.

I hereby designate each of the following individual(s) an agent of Knife River Corporation – Mountain West, and each of them is authorized and empowered to execute and deliver documents, including but limited to, construction contracts, subcontracts, prime contractor proposals, subcontractor proposals, competitive bids for projects, price quotations or bids for materials, lien releases, and other related agreements, documents, and instruments with governmental authorities (federal, state, county, or local), with general contractors or subcontractors, and with private parties, in the name and on behalf of Knife River Corporation – Mountain West:

Norm Avery
Jim Lauteren
David Midtlyng
Jessee Rosin

This authorization letter is effective and in full force and effect, until modified.

Sincerely,

Zachary O'Keefe
President
Knife River Corporation – Mountain West

Appointment of Agents  Power of Attorney - Page 1 of 2
STATE OF IDAHO

COUNTY OF ADA

Zachary O’Kelley, being first duly sworn, deposes and says that he is the President for Knife River Corporation – Mountain West; that the execution of this instrument is the act and deed of the Corporation, that he has read the foregoing document and knows the contents thereof, and that the statements herein are true.

Zachary O’Kelley
President
Knife River Corporation – Mountain West

Subscribed and sworn to before me on ______________, 2018.

[Signature]

Notary Public
Ada County, Idaho
My commission expires: 7/22/2019
**ADDENDUM 01**  
**FB 20-207**  
Realignment of Taxiway H and Mill/Overlay Portions of Taxiways J and B  
Aviation Department  
*Boise City Purchasing*  
Missy Grothaus  
P.O. Box 500  
Boise, Idaho 83701-0500  
Phone (208) 384-3779  
Fax (208) 384-3995  
MGrothaus@CityofBoise.org

**Date:** March 12, 2020

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**Total Pages Transmitted (Including this sheet):** (51)  
**Page 1 – Cover & Message**

**Message:**  
You are hereby notified of the following clarifications of and/or revisions to the Drawings and Specifications for the above referenced project.

**Pre-Bid Question and Answers**

**Q1.** When will Notice to Proceed be issued?  
**A1.** Notice to Proceed is anticipated for mid-May, 2020.

**Q2.** Will P-608 have aggregate?  
**A2.** P-608 will not have aggregate.

**Q3.** Will there be a permit allowance?  
**A3.** Yes, the allowance will be $10,000.

**Q4.** Will there be a pay item for direct earth buried 1-2” PVC?  
**A4.** A detail and pay item will be added for direct earth buried 1-2” PVC in Addendum No. 2.

**Q5.** The bid form says SF for P-101-5.5. Is the quantity for SF or SY?
A5. We will clarify in Addendum No. 1 that the quantity is per SY.

Attachments

- Pre-Bid agenda and notes
- Pre-Bid sign-in sheet
- Addenda from Proposal Contract Documents and Technical Specifications as described in this addendum.

This Addendum is hereby as of the above posted date made a part of the project requirements and contract documents for the referenced project. You are to note the receipt of, and compliance with this Addendum upon the space provided within the bid or proposal. Failure to acknowledge this Addendum does not relieve you from fulfilling the Addendum requirements. This is the only communication you will receive regarding this Addendum.

A. MODIFICATIONS TO CONTRACT DOCUMENTS & SPECIFICATIONS

1. PROPOSAL FORM. Updated estimated quantity of Item C-100-14.2, description and unit price of Item C-102-5.2, unit of Item P-101-5.5, and item description for ISPWC 705.4.1.A.1. REPLACE pages 5, 6 & 18 (3 pages) included in Addendum No. 1.

2. TECHNICAL SPECIFICATIONS. ITEM P-109 SAWCUTTING. INSERT entire specification.

3. TECHNICAL SPECIFICATIONS. ITEM P-608-R RAPID CURE SEAL COAT. INSERT entire specification.

4. TECHNICAL SPECIFICATIONS. ITEM ISPWC-705 PORTLAND CEMENT CONCRETE PAVEMENT. INSERT entire specification.

5. TECHNICAL SPECIFICATIONS. ITEM ISPWC-802 RE-GRADE AND RECOMPACT BASE COURSE. INSERT entire specification.


B. MODIFICATIONS TO CONTRACT DRAWINGS

None.
A. Introductions & Sign-In

B. Project Description

Project work includes asphalt mill and overlay of approximately 13,000 tons of asphalt pavement. Also included is the construction of approximately 20,000 SY of new full depth asphalt taxiway, shoulder, and vehicle service road pavement. Related work includes installation of new drainage pipe and structures, installation of over 30 new taxiway edge lights and associated conduit and cable, concrete encased duct banks for new ducts and existing FAA fiber optic and electrical duct lines.

C. Schedule / Phasing

Phase 1B requires the shutdown of Runway 10R-28L for 35 Calendar Days only.

Phase 2A and 2B are weekend work only from Saturday 10:00 AM through Monday 6:00 PM.

The Bidder acknowledges that he is aware of the Liquidated Damages that are part of this contract.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Liquidated Damages Cost</th>
<th>Allowed Construction Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>$2,500/day</td>
<td>55 Calendar Days</td>
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<td>2A</td>
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<tr>
<td>2B</td>
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<td>7 Calendar Days</td>
</tr>
<tr>
<td>3</td>
<td>$2,500/day</td>
<td>30 Calendar Days</td>
</tr>
</tbody>
</table>
Contract time starts on NTP. The maximum construction time allowed for Phases 1, 2 and 3 will be the sum of the time allowed for individual phases but not more than 90 calendar days.

D. Construction Plans

2. The access to the ARFF station shall remain clear of construction vehicles at all times.
3. The Airport Perimeter Road is to be kept open at all times.
4. A Gate Guard will be required at Gates 500 and "650" as shown on the phasing plans. Flag persons will be required to control traffic as shown on the phasing plans. The Contractor will NOT be allowed to cross any active runway or taxiway.
5. During non-construction times construction equipment shall be parked in the Contractor Staging Areas as shown on phasing plans.
6. Haul Routes – as shown on phasing plans.
7. All unclassified excavation material shall be hauled to waste areas as indicated on plans. Other removal items shall be hauled off Airport Property. The waste area is the Orchard Street waste area. Addendum #2 will provide waste area location in the plans.
8. Concrete washout area as indicated on plans. Concrete washout area shall be inside contractor’s staging area.

E. Bid Date, Time & Location

BID DATE: MARCH 25, 2019 at 11:00 AM Local Time

Sealed bids will be received by the City of Boise at the Purchasing Office 1st Floor at Boise City Hall, 150 North Capitol Boulevard, Boise, Idaho 83702, before 11:00 AM (local time), on the bid date, at which time all bids will be publicly opened and read aloud. No late bids will be opened or accepted.

Plan Holders List is available online at the City of Boise website: http://www.cityofboise.org/purchasing/

1. Form of Bid: Unit Price, Bid Prices held for forty-five (45) days.
2. Requirements for Bidders: Bidder is required to submit all Proposal Forms / Bid Schedule, etc. (Required at bid opening top right hand corner). See the Bidder’s Checklist to ensure that all necessary items are included with the bid.

Disadvantage Business Enterprise (DBE) participation is encouraged.
The Contractor shall be licensed as Public Works Contractors at the time of contract signing. Provide the Idaho Public Works Contractor’s License number.

Acknowledge receipt of all addenda on the bid forms. Addendum No. 1 will be issued after this meeting.

Check all math on Bid Schedule forms, Fill in all blanks with words and numbers. When contradictions occur, the written number shall govern.

F. Project Award

The Award of the Contract is contingent on the City of Boise securing adequate funding.

The project will consist of two schedules of work:

- Schedule I (Federal) – Realignment of Taxiway H and Mill/Overlay of Portions of Taxiways J and B
- Schedule II (Non-Federal) – UPS K-loader Pads

The Contractor will have 10 days to execute and return signed contracts, bonds, etc from the date of the Notice of Award.

A Notice to Proceed will be issued to initiate contract time.


1. Liquidated Damages: $2,500 per day, Phases 1A, 1B, 1C, 2A, 2B, 3.

2. Boise Airport is required to follow typical FAA guidelines as this is a federally funded project.

3. Bonds & Insurance: 5% Bid Bond (or acceptable substitute) required with bid. 100% Performance and Payment Bonds & Insurance Certificates will be required of the successful bidder 10 days after Contract Award.

4. Contractor Payments: 5% retainage will be withheld until completion of the project.

5. Pre-Construction Meeting: A mandatory Pre-Construction Meeting will be held prior to the start of construction. The Contractor will be required to submit schedule, safety plan and Quality Control Plan prior to or at this meeting.

6. Gates shall remain closed at all times or a gate guard will be required at all times the gate is open.
7. Construction activity will be conducted during the daylight hours.

8. Protection of Utilities & Cables: Call 811 Digline before you dig. All utilities shall be notified 48 hours prior to construction. Contractor will locate and protect from damage all existing utilities and cables. Repair of damaged utilities and cables must be completed immediately and at the Contractor’s expense.


10. Permits: Contractor is responsible for obtaining all required permits for the project.

11. The Contractor shall develop and submit, for review and approval, a Safety Plan Compliance Document (SPCD), prior to the issuance of a notice-to-proceed (NTP). See Construction Safety and Phasing Plan Page SC-23. NOI may be filed after SWPPP approved by BOI. 14 day activation wait period.

The Contractor shall be aware of the requirements of C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control.

The Contractor is responsible for preparing a Storm Water Pollution Prevention Plan (SWPPP). The Contractor will be required to submit a copy of the SWPPP to the Airport for approval. The Contractor must file a Notice of Intent (NOI) with the EPA, which will not be active until the Airport receives and approves the Contractor’s SWPPP. A Notice to Proceed (NTP) may be issued after the SWPPP is approved and the EPA permitting process is completed. At the completion of the project, the Contractor must file a Notice of Termination (NOT) with the EPA prior to final project acceptance.

H. Technical Specs
FAA Specifications.

I. Questions/Clarifications

All questions shall be in writing and directed to:

Missy Grothaus
Boise City Purchasing
Fax: 208-384-3995
Email: MGrothaus@cityofboise.org
1. Deadline for questions and clarifications shall be received no later than close of business on March 18, 2020.

J. **Open Discussion / Questions:**
   1. NTP is anticipated mid-May 2020
   2. Will P-608 have aggregate – No
   3. Will there be a Permit Allowance? Yes, $10,000
   4. Will there be a pay item for direct earth buried 1-2” PVC? There will be a detail and a pay item added.
   5. The bid form says SF for P-101-5.5. Is the quantity for SF or SY. We will clarify in Addendum #1 that the quantity is per SY.
# PRE-BID CONFERENCE SIGN-IN SHEET

**REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B**

**BOISE AIRPORT**

**FAA A.I.P. NO. 3-16-0003-073-2020**

**BOISE CITY PROJECT NO. F/B 20-207**

**TUESDAY MARCH 10, 2020**

**2:00 PM**

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Phone Number</th>
<th>E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Riley</td>
<td>RS&amp;H</td>
<td>801-428-7545</td>
<td><a href="mailto:greg.riley@rsandh.com">greg.riley@rsandh.com</a></td>
</tr>
<tr>
<td>Heather Church</td>
<td>PSI</td>
<td>208-322-7000</td>
<td><a href="mailto:hchurch@psi.boise.com">hchurch@psi.boise.com</a></td>
</tr>
<tr>
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<tr>
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<td>208 819 2668</td>
<td><a href="mailto:ry.butler@knife-river.com">ry.butler@knife-river.com</a></td>
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<td>Steve Earl</td>
<td>KRC</td>
<td>208 914 5991</td>
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<tr>
<td>Don Rye</td>
<td>QET</td>
<td>208 866 3869</td>
<td><a href="mailto:don@qet.jaho.com">don@qet.jaho.com</a></td>
</tr>
<tr>
<td>Jeff Hannes</td>
<td>Central Paving</td>
<td>208 350 0973</td>
<td><a href="mailto:jeff@centralpaving.com">jeff@centralpaving.com</a></td>
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<tr>
<td>James B. Burggraf</td>
<td>Central Paving</td>
<td>949-254-3916</td>
<td><a href="mailto:james@centralpaving.com">james@centralpaving.com</a></td>
</tr>
<tr>
<td>Kurt Chatterson</td>
<td>IMCO Const.</td>
<td>360-201-7294</td>
<td><a href="mailto:kchatterson@imcoconstruction.com">kchatterson@imcoconstruction.com</a></td>
</tr>
<tr>
<td>Chad Fields</td>
<td>Mt. West Electric Inc.</td>
<td>208-691-8465</td>
<td><a href="mailto:chfields@mtwestelec.com">chfields@mtwestelec.com</a></td>
</tr>
<tr>
<td>Markus Green</td>
<td>BOI</td>
<td>(208) 972-8435</td>
<td><a href="mailto:mcgreen@cityofboise.org">mcgreen@cityofboise.org</a></td>
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<tr>
<td>Missy Gonzales</td>
<td>BOI</td>
<td>208-972-8474</td>
<td><a href="mailto:mcgonzales@cityofboise.org">mcgonzales@cityofboise.org</a></td>
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<tr>
<td>Jill Singer</td>
<td>BOI</td>
<td>208 972 8594</td>
<td><a href="mailto:jsinger@cityofboise.org">jsinger@cityofboise.org</a></td>
</tr>
</tbody>
</table>
## CITY OF BOISE – BID SCHEDULE I (FEDERAL)

**AIRPORT:** BOISE AIRPORT  
**PROJECT:** REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B  
**FAA AIP PROJ. NO.:** 3-16-0003-073-2020  
**CITY PROJ. NO.:** F/B 20-207  
**RS&H PROJECT NO.:** 225-0005-022  

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description and Unit Price in Words</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Unit Price in Numbers</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-100-14.1</td>
<td>Contractor Quality Control Program at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C-100-14.2</td>
<td>Permitting Allowance at ___________________________ dollars and ___________________________ cents</td>
<td>$10,000</td>
<td>AL</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C-102-5.1</td>
<td>Storm Water Pollution Prevention Plan (SWPPP) at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C-102-5.2</td>
<td>Implement Approved SWPPP at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>C-105-6.1</td>
<td>Mobilization at ___________________________ dollars and ___________________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
<td>Unit</td>
<td>Unit Price in Numbers</td>
<td>Total Amount</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------</td>
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<td>--------------</td>
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<tr>
<td>P-101-5.1</td>
<td>2-Inch Nominal Depth Milling at ____________________________ dollars and _______ cents</td>
<td>260</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.2</td>
<td>2.5-Inch Nominal Depth Milling at ____________________________ dollars and _______ cents</td>
<td>5,100</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.3</td>
<td>3-Inch Nominal Depth Milling at ____________________________ dollars and _______ cents</td>
<td>19,550</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.4</td>
<td>Runway Lap Joint Mill at ____________________________ dollars and _______ cents</td>
<td>100</td>
<td>SY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-101-5.5</td>
<td>Full Depth Asphalt Removal at ____________________________ dollars and _______ cents</td>
<td>20,350</td>
<td>SY</td>
<td>$</td>
<td>$</td>
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<tr>
<td>P-101-5.6</td>
<td>Full Depth Asphalt/PCC Removal at ____________________________ dollars and _______ cents</td>
<td>600</td>
<td>SY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-101-5.7</td>
<td>Pavement Marking Blackout at ____________________________ dollars and _______ cents</td>
<td>600</td>
<td>SF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>P-101-5.8</td>
<td>Pavement Marking Obliteration at ____________________________ dollars and _______ cents</td>
<td>3,500</td>
<td>SF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
<td>Unit</td>
<td>Unit Price in Numbers</td>
<td>Total Amount</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>-----------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>P-608-R-8.1</td>
<td>Asphalt Surface Treatment at ____________________ dollars and ____________________ cents</td>
<td>1,660</td>
<td>SY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>ISPWC 705.4.1.A.1</td>
<td>Portland Cement Concrete Pavement (Class 5000 AF, 10” Thick) at ____________________ dollars and ____________________ cents</td>
<td>289</td>
<td>SY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>ISPWC 802-4.1.A.1</td>
<td>Re-Grade and Recompact Base Course at ____________________ dollars and ____________________ cents</td>
<td>289</td>
<td>SY</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-109-7.2</td>
<td>Installation of ACE 3 ALCMS/CCR Interface Unit Including Graphic Update at ____________________ dollars and ____________________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

TOTAL AMOUNT OF SCHEDULE II (NON-FEDERAL) (IN WORDS):
______________________________ DOLLARS
__________________________ CENTS

Total Schedule II (Non-Federal) Amount: _______________

**NOTE**: BID AWARD WILL BE MADE BASED ON THE LOWEST TOTAL AMOUNT FOR SCHEDULE I (FEDERAL)
ITEM P-109 SAWCUTTING

DESCRIPTION

109-1.1 This work shall consist of sawcutting the edge of existing portland cement and/or asphaltic concrete pavements to provide a uniform joint alignment in sound material, as shown on the Plans or as directed by the Engineer. Sawcut depth varies, see plans and details for depths.

EQUIPMENT

109-2.1 Saws shall be power-driven, self-propelled, wheel or track-mounted, and capable of cutting to a depth of at least three (3) inches in one pass. The Contractor shall make the necessary number of passes to cut through the portland cement and/or bituminous concrete pavement. The use of a cutting wheel mounted on a roller, grader or similar equipment, or the use of pneumatically driven hand-held tools, will only be approved if the Contractor can demonstrate to the satisfaction of the Engineer that such equipment can consistently produce satisfactory results. Multi-blade arbor saws shall be used to construct sealant reservoirs.

CONSTRUCTION METHODS

109-3.1 The Contractor shall establish the line to be cut using chalkline or similar means in accordance with the details shown on the Plans or as directed by the Engineer. The finished cut shall be true to line, smooth and vertical and shall not deviate from the established line more than 1/2-inch from side to side or end to end of the pavement being sawcut.

109-3.2 The existing paving material beyond the saw cut on the construction side shall be removed to the depth of the final cut and disposed of legally off Airport property. The saw cut depth shall be full depth so that spalling or other breakage of the existing pavement along the bottom of the pavement does not occur. If spalling or other breakage of the existing pavement along the bottom of the pavement does occur, the Contractor shall relocate the saw cut line to a point deeper in the existing pavement to remove completely any spalled or broken pavement so that the subbase under the existing pavement is not damaged and the new pavement can be constructed up against the existing pavement without either the new or existing pavement strength and pavement section being compromised.

109-3.3 All dust, chips, slurry, or waste material shall be carefully collected and removed from the site in accordance with the general safety requirements of the Contract and disposed of legally off the airport property.

METHOD OF MEASUREMENT

109-4.1 The quantity of sawcutting will be measured per linear foot for payment. This price shall be full compensation for furnishing all materials and for all preparation, layout, and for all labor, tools, equipment, and incidentals necessary to complete the item.

BASIS OF PAYMENT

109-5.1 Payment shall be made at the respective contract price per linear foot for pavement sawcutting. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.
Payment will be made under:

Item P-109-5.1  Sawcutting .................................................................................................. Per Linear Foot

TESTING REQUIREMENTS

109-6.1 None.

END OF ITEM P-109
ITEM P-608-R RAPID CURE SEAL COAT

DESCRIPTION

608-R-1.1 This item shall consist of the application of an asphalt surface treatment composed of natural and refined asphalt materials, additives, and light oils, for taxiways and runways with the application of a suitable aggregate to maintain adequate surface friction; and airfield secondary and tertiary pavements including aprons, shoulders, overruns, roads, parking areas, and other general applications with or without aggregate applied as designated on the plans.

The terms seal coat, asphalt sealer, and asphalt material are interchangeable throughout this specification. The term asphalt means natural and refined asphalt materials in this specification.

MATERIALS

608-R-2.1 Aggregate. Not used.

608-R-2.2 Asphalt material. The solvent-based rapid cure material is specified as “Quickseal” Emulsified Asphalt Fog Oil (concentrate).

“Quickseal” is pre-diluted emulsion intended as a fast breaking fog seal and tacking material to be spray-applied on asphalt pavement surfaces, quickly leaving a hard asphalt seal; resistant to puck-up and tracking under automobile tires.

This material must be stable for use at 50% dilution rate, Dilution by the supplier is required to insure product consistency. Typical final asphalt residue is 40%-45%.

The concentrate for “Quickseal” will meet the following specifications prior to dilution:

<table>
<thead>
<tr>
<th>AASHTO Test Method</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sieve Test, %</td>
<td>T59</td>
</tr>
<tr>
<td>Particle Charge Test</td>
<td>T59</td>
</tr>
<tr>
<td>Demulsibility 35ml 0.8% Sodium T59 Dioctyl Sulfosuccinate, %</td>
<td>T59</td>
</tr>
</tbody>
</table>

Distillation:

| Residue by Distillation @ 260C (500F)  | T59| 60 min |
| Penetration                           | T49| 30 min | 100 max |

The Contractor shall provide a copy of the manufacturer’s Certificate of Analysis (COA) for the asphalt sealer delivered to the project. If the asphalt sealer is diluted at other than the manufacturer’s facility, the Contractor shall provide a supplemental COA from an independent laboratory verifying the asphalt sealer properties. The COA shall be provided to and approved by the RPR before the asphalt material is applied. The furnishing of the vendor's certified test report for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer’s COA may be subject to verification by testing the material delivered for use on the project.
The asphalt sealing material must be applied in an undiluted form. The material may be stored at ambient temperature for long periods of time if necessary. Storage will follow industry standard recommendations due to the flammability of the material; avoid sparks and open flames to come into contact with the material or any gasses that might be escaping the storage vessel.

Contractor shall provide a list of airport pavement projects, exposed to similar climate conditions, where this product has been successfully applied within at least 5 years of the project.

608-R-2.3 Seal Coat with Aggregate. Not used.

COMPOSITION AND APPLICATION RATE

608-R-3.1 Application Rate. The approximate amounts of materials per square yard (square meter) for the asphalt surface treatment shall be as provided in the table for the treatment area(s) at the specified rate(s) as noted on the plans. The actual application rates will vary within the range specified to suit field conditions and will be recommended by the manufacturer’s representative for control strip evaluations, and approved by the RPR from the test area/sections evaluation.

<table>
<thead>
<tr>
<th>Dilution Rate</th>
<th>Quantity of Sealer gal/yd² (l/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>0.08-0.15 (0.36-0.68)</td>
</tr>
</tbody>
</table>

608-R-3.2 Control areas and control strips. A qualified manufacturer’s representative shall be present in the field to assist the Contractor in applying control areas and/or control strips to determine the appropriate application rate of both sealer and aggregate to be evaluated and approved by the RPR.

A test area and/or section shall be applied for each differing asphalt pavement surface identified in the project. The control area(s) and/or control strip(s) shall be used to determine the material application rate(s) of both sealer and aggregate prior to full production. The same equipment and method of operation shall be utilized on the control area(s) and/or control strip(s) as will be utilized on the remainder of the work.

a. For taxiway, taxilane and apron surfaces. Prior to full application, the Contractor shall place test areas at varying application rates as recommended by the Contractor’s manufacturer’s representative to determine appropriate application rate(s). The test areas will be located on representative section(s) of the pavement to receive the asphalt surface treatment designated by the RPR.

b. For runway and high-speed exit taxiway surfaces. Not used.

c. Control strip. If the control strip should prove to be unsatisfactory, necessary adjustments to the application rate, placement operations, and equipment shall be made. Additional control strips shall be placed and additional skid resistance tests performed and evaluated. Full production shall not begin without the RPR’s approval of an appropriate application rate(s). Acceptable control strips shall be paid for in accordance with paragraph 608-R-8.1.
CONSTRUCTION METHODS

608-R-4.1 Worker safety. The Contractor shall obtain a Safety Data Sheet (SDS) for both the asphalt sealer product and aggregate and require workmen to follow the manufacturer’s recommended safety precautions. All additional industry standard safety precautions regarding the storage and applications of solvent based asphalts should be understood and followed by the Contractor.

608-R-4.2 Weather limitations. The asphalt sealer shall be applied only when the existing pavement surface is dry and when the weather is not foggy, rainy, or when the wind velocity will prevent the uniform application of the material. No material shall be applied when dust or aggregate is blowing or when rain is anticipated within four (4) hours of application completion. The atmospheric temperature and the pavement surface temperature shall both be at, or above 55°F (14°C) and rising. The sealer will not be applied when pavement temperatures are expected to exceed 160°F within the subsequent 72 hours if traffic will be opened on pavement within those 72 hours. During application, account for wind drift. Cover existing buildings, structures, runway edge lights, taxiway edge lights, informational signs, retro-reflective marking and in-pavement duct markers as necessary to protect against overspray before applying the sealer. Should sealer get on any light or marker fixture, promptly clean the fixture. If cleaning is not satisfactory to the RPR, the Contractor shall replace any light, sign or marker with equivalent equipment at no cost to the Owner.

608-R-4.3 Equipment and tools. The Contractor shall furnish all equipment, tools, and machinery necessary for the performance of the work.

a. Pressure distributor. The sealer shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the sealer. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour (13 km per hour) or seven (700) feet per minute (213 m per minute). The Contractor will provide verification of truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application per nozzle manufacturer, spray-bar height and pressure and pump speed appropriate for the viscosity and temperature of sealer material, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use. The distributor truck shall be equipped with a 12-foot (3.7-m), minimum, spray bar with individual nozzle control. The distributor truck shall be capable of specific application rates in the range of 0.05 to 0.25 gallons per square yard (0.15 to 0.80 liters per square meter). These rates shall be computer-controlled rather than mechanical. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the sealer, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy.

The distributor truck shall effectively mix the material prior to application.

The distributor shall be equipped with a hand sprayer to spray the sealer in areas not accessible to the distributor truck.

b. Aggregate spreader. Not used.


d. Equipment calibration. Asphalt distributors must be calibrated within the same construction season in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.
608-R-4.4 Preparation of asphalt pavement surfaces. Clean pavement surface immediately prior to placing the seal coat so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film. Remove oil or grease from the asphalt pavement by scrubbing with a detergent, washing thoroughly with clean water, and treating these areas with the oil spot primer. Any additional surface preparation, such as crack repair, shall be in accordance with Item P-101, paragraph 101-3.6.

a. New asphalt pavement surfaces, which includes a waiting period. Allow new asphalt pavement surfaces to cure so that there is no concentration of oils on the surface.

Perform a water-break-free test to confirm that the surface oils have degraded and dissipated. (Cast approximately one gallon (4 liters) of clean water out over the surface. The water should sheet out and wet the surface uniformly without crawling or showing oil rings.) If signs of crawling or oil rings are apparent on the pavement surface, additional time must be allowed for additional curing and retesting of the pavement surface prior to treatment.

608-R-4.5 Application of asphalt sealer. The asphalt sealer shall be applied using a pressure distributor upon the properly prepared, clean and dry surface at the application rate recommended by the manufacturer’s representative and approved by the RPR from the test area/sections evaluation for each designated treatment area. Recommended material temperature for application is 70°F to 90°F, but depending on the application equipment used, good material dispersion and pavement coverage may be achieved at lower material temperatures. The material should not be heated above 100°F.

Pavement surfaces which have excessive runoff of seal coat due to excessive amount of material being applied or excessive surface grade shall be treated in two or more applications, if feasible, to the specified application rate at no additional cost to the Owner. Each additional application shall be performed after the prior application of material has penetrated into the pavement.

If low spots and depressions greater than 1/2 inch (12 mm) in depth in the pavement surface cause ponding or puddling of the applied materials, the pavement surface shall be lightly broomed with a broom or brush type squeegee. Brooming shall continue until the pavement surface is free of any pools of excess material. Ponding and/or puddling shall not cause excessive pavement tackiness and/or additional distress.

During all applications, the surfaces of adjacent structures shall be protected to prevent their being spattered or marred. Asphalt materials shall not be discharged into borrow pits or gutters or on the airport area.

Caution. Heating asphalt binders of any kind always constitutes some degree of hazard. The most hazardous of these are cutback asphalts because of the highly volatile solvents used. Care must be taken not to allow any spark or open flame to come in contact with the cutback asphalt or the gases from cutback asphalt due to the low flash point. It is the Contractor’s responsibility to understand and adhere to these standards in regards to staying within the recommended application temperatures of this material and at all times during production.

608-R-4.6 Application of aggregate material. Not used.

QUALITY CONTROL (QC)

608-R-5.1 Manufacturer’s representation. The manufacturer’s representative knowledgeable of the material, procedures, and equipment described in the specification is responsible to assist the Contractor and RPR in determining the appropriate application rates of the emulsion and aggregate, as well as recommendations for proper preparation and start-up of seal coat application. Documentation of the manufacturer representative’s experience and knowledge for applying the seal coat product shall be furnished to the RPR a minimum of 10 work days prior to placement of the control strips. The cost of the manufacturer’s representative shall be included in the Contractor’s bid price.
608-R-5.2 Contractor qualifications. The Contractor shall provide the RPR with the seal coat Contractor’s qualifications for applicators, personnel and equipment. The Contractor shall also provide documentation that the seal coat Contractor is qualified to apply the seal coat and has made at least three (3) applications similar to this project in the past two (2) years.

MATERIAL ACCEPTANCE

608-R-6.1 Application rate. The rate of application of the asphalt emulsion shall be verified at least twice per day.

608-R-6.2 Friction tests. Not used.

METHOD OF MEASUREMENT

608-R-7.1 Asphalt surface treatment. The quantity of asphalt surface treatment shall be measured by the square yards of material applied in accordance with the plans and specifications and accepted by the RPR.

The Contractor must furnish the RPR with the certified weigh bills when materials are received for the asphalt material used under this contract. The Contractor must not remove material from the tank car or storage tank until initial amounts and temperature measurements have been verified.

BASIS OF PAYMENT

608-R-8.1 Payment shall be made at the contract unit price per square yard for the asphalt surface treatment applied and accepted by the RPR. This price shall be full compensation for all surface preparation, furnishing all materials, delivery and application of these materials, for all labor, equipment, tools, and incidentals necessary to complete the item and all work required to meet AC 150/5320-12, and any costs associated with furnishing a qualified manufacturer’s representative to assist with control strips.

608-R-8.2 Payment shall be made at the contract unit price per square yard for asphalt surface treatment and all work required to meet AC 150/5320-12.

Payment will be made under:

Item P-608-R-8.1 Asphalt Surface Treatment – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)
AASHTO T49 Standard Test Method for Penetration of Bituminous Materials
AASHTO T59 Standard Test Method for Emulsified Asphalts
ASTM International (ASTM)
ASTM C88 Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117 Standard Test Method for Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C128 Standard Test Method for Relative Density (Specific Gravity) and Absorption of Fine Aggregate
ASTM C566 Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
ASTM C1252 Standard Test Methods for Uncompacted Void Content of Fine Aggregate
ASTM D5 Standard Test Method for Penetration of Asphalt Materials
ASTM D36 Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)
ASTM D402 Standard Test Method for Distillation of Cutback Asphalt
ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
ASTM D2995 Standard Practice for Estimating Application Rate of Bituminous Distributors
ASTM D5340 Standard Test Method for Airport Pavement Condition Index Surveys
ASTM D6433 Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys
ASTM D6997 Standard Test Method for Distillation of Emulsified Asphalt

Advisory Circulars (AC)
AC 150/5320-12 Measurement, Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces
AC 150/5320-17 Airfield Pavement Surface Evaluation and Rating (PASER) Manuals
AC 150/5380-6 Guidelines and Procedures for Maintenance of Airport Pavements
AC 150/5380-7 Airport Pavement Management Program (PMP)

END OF ITEM P-608-R
MODIFICATIONS TO
ISPWC SECTION 705 – PORTLAND CEMENT CONCRETE PAVEMENT
(Idaho Standards for Public Works construction 2012 Edition)

Section 705.3.4.B. Concrete placement is expected to take place during periods of cold weather. The contractor is responsible for supplying adequate insulation (i.e. Concrete blankets) to maintain required temperatures of the concrete throughout the curing process. The Contractor shall provide all necessary actions to ensure the concrete is protected during and after placement from the cold weather. No separate payment will be made for the cold weather concrete provisions.

Section 705.3.6 Joints. All joints must be sawn.

Section 705.3.9.E Protection and Opening Pavement to Traffic. Provide eight (8) cylinders for breaks (including two spares). First two cylinders break at 4 days. Second two cylinders break at 7 days. Third two cylinders break at 28 days. Open to traffic at 75% design strength. Design strength is 5,000 PSI at 28 days.

ITEM 705.4.1.A.1 – Portland Cement Concrete Pavement (Class 5000AF, 10” Thick)

This item shall include the placement of new Portland cement concrete as shown on the plans.

This item shall include all costs associated with production, transportation, placement, testing, finishing, curing and protecting the new Portland cement concrete and all labor, materials, and equipment necessary for completing the work. All doweling, reinforcement, joint saw cutting and sealing shall be considered incidental to this item. Sealing shall be performed per P-605.

Payment for this item will be made under:

705.4.1.A.1 Portland Cement Concrete Pavement (Class 5000AF, 10” Thick) ............
......................................................................................................................... Per Square Yard

Section 705.1.3.E, and F. Delete. Hot poured sealant will not be allowed.
MODIFICATIONS TO
ISPWC SECTION 802 – Crushed Aggregates
(Idaho Standards for Public Works construction 2012 Edition)

Add the following to Sections 802.3.1:
D. Salvage and reuse existing crushed aggregate material and recompact per section 802.
E. Place 4 inches of crushed 1.5 inch washed drain rock and static roll with 4 passes of a min. 67 inch static roller. Gradation shall meet the following table:

<table>
<thead>
<tr>
<th>Crushed Aggregate</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 inch</td>
<td>100</td>
</tr>
<tr>
<td>3/4 inch</td>
<td>25-60</td>
</tr>
<tr>
<td>3/8 inch</td>
<td>0-4</td>
</tr>
<tr>
<td>No. 200</td>
<td>0-2</td>
</tr>
</tbody>
</table>

Payment for this item will be made under:

ITEM 802.4.1.A.1  Re-Grade and Recompact Base Course........................Per Square Yard
ITEM 802.4.1.A.2  Crushed 1.5-inch Washed Drain Rock .......................Per Square Yard
APPENDIX A

GEOTECHNICAL REPORT

Geotechnical Report – Terracon
Pavement Exploration Report
Taxiway H Realignment
Boise Airport
September 13, 2019
Terracon Project No. 62185123

Prepared for:
RS&H Inc.
Salt Lake City, Utah

Prepared by:
Terracon Consultants, Inc.
Boise, Idaho
September 13, 2019

RS&H Inc.
675 East 2100 South, Suite 325
Salt Lake City, Utah 84106

Attn: Mr. Greg Riley, P.E.
P: (801) 924-8556
E: greg.riley@rsandh.com

Re: Pavement Exploration Report Revision
    Taxiway H Realignment
    Boise Airport
    Terracon Project No. 62185123

Dear Mr. Riley:

We have completed the Pavement Exploration services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. P6218123 Revision 1 dated July 26, 2019. This revised report presents the findings of the subsurface explorations and provides materials evaluation of proposed realignment of Taxiway H.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Gabriel A. Burgess, P.E.
Senior Geotechnical Engineer

John L. Andreae, P.E.
Senior Geotechnical Engineer
REPORT TOPICS

REPORT SUMMARY ....................................................................................................... 1
INTRODUCTION ............................................................................................................. 1
SITE CONDITIONS ......................................................................................................... 1
MATERIALS CHARACTERIZATION ............................................................................. 2
SITE OVERVIEW ............................................................................................................ 3
GENERAL COMMENTS ................................................................................................. 5

Note: This report was originally delivered in a web-based format. Orange Bold text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
EXPLORATION PLANS
EXPLORATION RESULTS (Boring Logs and Laboratory Data)
SUPPORTING INFORMATION (General Notes and Unified Soil Classification System)
# REPORT SUMMARY

<table>
<thead>
<tr>
<th>Topic</th>
<th>Overview Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Description</td>
<td>We understand that the project consists of evaluation of existing subgrade materials in the area of the proposed realignment of Taxiway H. The existing taxiway will be shifted to the east.</td>
</tr>
<tr>
<td>Geotechnical Characterization</td>
<td>In general, the borings encountered fill material consisting of silt with variable amounts of sand and gravel to a depth of about ½ foot to 3 feet. The depth of the fill increased from south to north. Underlying the fill in borings B-1 and B-2 was silt with variable sand and gravel content and plasticity. The silt soils extended to 5 to 11 feet in the borings, and increased in depth from south to north. Some weak to moderately cemented layers were noted that were very stiff to hard in relative consistency. Underlying the fill in boring B-3 and the native silt soils in borings B-1 and B-2 were granular soil consisting of poorly graded gravel with variable amounts of sand and silt and poorly graded sand with silt and gravel. The granular soils were typically dense to very dense in relative density and were encountered to the extent of the exploration.</td>
</tr>
<tr>
<td>General Comments</td>
<td>It appears that silt soils were primarily present in the northern portion of the alignment. These soils typically provide lower support values for pavements and are highly sensitive to moisture and frost. It may be advantageous to remove and replace the upper portion of this stratum with the granular soils encountered in the southern section of the explorations or from a suitable borrow source.</td>
</tr>
</tbody>
</table>

1. If the reader is reviewing this report as a pdf, the topics above can be used to access the appropriate section of the report by simply clicking on the topic itself.
2. This summary is for convenience only. It should be used in conjunction with the entire report for design purposes.
INTRODUCTION

This report presents the results of our subsurface exploration and materials evaluation services performed for the proposed realignment of Taxiway H at the Boise Airport. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Frost considerations
- Pavement design input
- Pavement construction

Subsurface exploration for this project included the advancement of three test borings to depths of about 11½ feet below the existing ground surface at locations determined by RS&H and Boise Airport personnel.

Maps showing the site and boring locations are shown in the Site Location and Exploration Plan sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs, and as separate graphs in the Exploration Results section of this report.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration.
MATERIALS CHARACTERIZATION

Subsurface Profile

We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data and our understanding of the planned construction. The following table provides our materials characterization.

The materials characterization forms the basis of our geotechnical calculations and evaluation of site preparation and pavement options. As noted in General Comments, the characterization is based upon widely spaced exploration points across the site, and variations are likely.

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Approximate Depth to Bottom of Stratum (feet)</th>
<th>Material Description</th>
<th>Consistency/Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>½ to 3</td>
<td>Fill: Composed of silt with variable amount of sand.</td>
<td>Stiff¹</td>
</tr>
<tr>
<td>2</td>
<td>5 to 11</td>
<td>Silt with variable sand and gravel content and varied in plasticity. Weak to moderately cemented layers. Not encountered in boring B-3.</td>
<td>Very stiff to hard</td>
</tr>
<tr>
<td>3</td>
<td>11½ (depth explored)</td>
<td>Poorly graded gravel with variable silt and sand content. Poorly graded sand with silt and gravel encountered in upper two feet of boring B-3 underlying the fill.</td>
<td>Dense to Very Dense</td>
</tr>
</tbody>
</table>
Conditions encountered at each boring location are indicated on the individual boring logs shown in the Exploration Results section and are attached to this report. Stratification boundaries on the boring logs represent the approximate location of changes in soil types. In situ, the transition between materials may be gradual.

Groundwater Conditions

The boreholes were observed while drilling and after completion for the presence of groundwater. Groundwater was not observed in the borings while drilling, or for the short duration the borings could remain open. Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Based on previous explorations within the area and nearby groundwater monitoring well information, groundwater in this area is expected to be relatively deep (greater than 50 feet). Shallow or perched conditions may be encountered, especially above cemented layers.

SITE OVERVIEW

Subgrade Soils In general, subgrade soils consisted of silt with variable sand. The exception was the southern boring (B-3) which encountered a shallow deposit of silt (1/2 foot) underlain by granular soils. The depth of the silt soils increased from south to north (fill and native). Granular soils typically underlie the silt. The silt soils are anticipated to be highly moisture sensitive and generally will provide lower strength for pavement support. It may be advantageous, depending upon grading requirements, to replace existing silt soils with granular material.

Seasonal Frost Considerations The design frost depth for this airfield is 24 inches. The encountered soils varied from Frost Group FG-4 (silt) to Frost Group FG-2 (poorly graded sand). We recommend that existing subgrade soil be classified as FG-4 unless the silt is replaced with granular material.

Laboratory Testing Laboratory testing of soils indicated that near surface fill and/or subgrade soils appear to be suitable to provide reliable pavement support if compacted properly per FAA
standard requirements. The following ASTM D1557 moisture-density (Proctor) test results were obtained:

<table>
<thead>
<tr>
<th>Boring</th>
<th>Depth (ft)</th>
<th>Soil Classification (USCS)</th>
<th>Max. Dry Density (pcf)</th>
<th>Optimum Moisture Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1</td>
<td>3 to 5</td>
<td>ML</td>
<td>102.3</td>
<td>20.4%</td>
</tr>
</tbody>
</table>

Results of Proctor Tests are shown in the Exploration Results appendix.

A California Bearing Ratio (CBR) test was performed on a sample of the subgrade soil in general accordance with ASTM D1883. Samples were prepared at target compaction values of 90%, 95% and 100% of the maximum dry density values, and within 0.5% of the optimum moisture content. The plus ¾ inch material was removed and replaced with an equivalent weight of finer aggregate in accordance with the test method. The following CBR values were obtained for the indicated compactive efforts after a 96-hour soaking period.

<table>
<thead>
<tr>
<th>Boring</th>
<th>Depth (ft)</th>
<th>90% Compaction</th>
<th>95% Compaction</th>
<th>100% Compaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1</td>
<td>3 to 5</td>
<td>4.6%</td>
<td>14.1%</td>
<td>44.3%</td>
</tr>
</tbody>
</table>

Results of CBR Tests are shown in Exploration Results. Reported values are for 0.10-inch deflection.

**Pavement Design Input** The encountered in situ moisture contents were generally at or higher than the CBR molding value of 20%. The samples at 87% and 95% relative compaction indicate that the soil is prone to increased moisture infiltration (9.5% to 11%) over an extended period of saturation. The CBR value also dropped nearly 10% for a 5% reduction in compactive effort (95% to 90%). Based on the CBR test results, the moisture sensitivity of the material, and a project compaction requirement of 95 percent of maximum dry density, we recommend a maximum CBR value of 10.0% for flexible pavement design.

The design CBR value was converted to an equivalent modulus of subgrade reaction (k) for rigid pavement design. A k-value of 140 in pounds per square inch per inch (pci) may be utilized in design of rigid pavement (if required).

Corrosion testing was conducted on one sample of the upper silt fill material. The following are the results of the corrosion testing.
We recommend that the design engineer(s) consult with manufacturers of specific products to determine adequate corrosion protection systems, as needed, for buried metal pipes and other metal objects used on this project. Based on results of the soluble sulfate tests, it is our opinion that normal grades of cement (Type I or II) may be used for concrete for this project, if concrete is required.

**GENERAL COMMENTS**

Our scope of services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of RS&H and the Boise Airport Authority for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.
EXPLORATION AND TESTING PROCEDURES

Field Exploration

<table>
<thead>
<tr>
<th>Number of Borings</th>
<th>Boring Depth (feet)</th>
<th>Planned Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>11½</td>
<td>Taxiway H Realignment</td>
</tr>
</tbody>
</table>

**Boring Layout and Elevations:** Boring locations were laid out by Boise Airport personnel. Coordinates on the boring logs were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet), and elevations are based on existing surface. We understand that RS&H will survey locations of the borings.

**Subsurface Exploration Procedures:** Borings were advanced with a truck-mounted, rotary drill rig using continuous flight augers hollow stem augers. Three samples were obtained in the upper 5 feet of each boring using Standard Penetration Test (SPT) sampling methods. Additionally, bulk samples were collected from the auger cutting during the drilling process. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the SPT resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. All borings were backfilled with bentonite after their completion.

The sampling depths, penetration distances, and other sampling information are recorded on the field boring logs. The samples are placed in appropriate containers and taken to our soil laboratory for testing and classification by a geotechnical engineer. Our exploration team prepares field boring logs as part of the drilling operations. These field logs include visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs are prepared from the field logs. The final boring logs represent the geotechnical engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

**Laboratory Testing**

The project engineer reviews the field data and assigns various laboratory tests to better understand the engineering properties of the various soil strata as necessary for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods are applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.
The laboratory testing program often includes examination of soil samples by an engineer. Based on the material’s texture and plasticity, we describe and classify the soil samples in accordance with the Unified Soil Classification System.
EXPLORATION PLANS
EXPLORATION PLAN

Taxiway H Realignment
Boise Airport
Boise, ID

Runway 10R – 28L

Diagram is for general location only, and is not intended for construction purposes.

62185123

Aerial photography provided by Microsoft Bing Maps
EXPLORATION RESULTS
2-7-5N=12
3-8-14N=22
21-36-31N=67
13-18-15N=33
4-5-25N=30

FILL - SILT WITH SAND (ML), brown to dark brown

SILT WITH GRAVEL (ML), brown, moist, very stiff to hard
dark brown and tan, weak cementation

POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), brown and gray

Boring Terminated at 11.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

PROJECT: Taxiway H Realignment
SITE: Boise Airport
Boise, ID

CLIENT: RS&H Inc
Salt Lake City, UT

LOCATION
See Exploration Plan
Latitude: 43.5678° Longitude: -116.2385°

MODEL LAYER
DEPHT

WATER LEVEL OBSERVATIONS
DEPTH (FT.)

FIELD TEST RESULTS

PERCENT FINES

WATER CONTENT (%)

DRY UNIT WEIGHT (pcf)

ATTERBERG LIMITS

LOCATION
See Exploration Plan
Latitude: 43.5678° Longitude: -116.2385°

GRAPHIC LOG
MODEL LAYER
DEPTH

Packet Pg. 683
BOURING LOG NO. B-2

PROJECT: Taxiway H Realignment

SITE: Boise Airport
Boise, ID

CLIENT: RS&H Inc
Salt Lake City, UT

LOCATION: See Exploration Plan
Latitude: 43.5673° Longitude: -116.2387°

MODEL LAYER LOG

DEPTH  WATER LEVEL OBSERVATIONS  FIELD TEST RESULTS  PERCENT FINES  ATTERBERG LIMITS

1  FILL - SILT WITH SAND (ML), trace gravel, light brown
   2.0

2  ELASTIC SILT WITH SAND (MH), light brown to brown, hard, weak cementation
   5.0

3  POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), dark brown, dense to very dense
   9-10-20
   19-26-28
   14-30-38
   Boring Terminated at 11.5 Feet

   brown and light gray
   11.5

   light brown

   Hammer Type: Automatic

Stratification lines are approximate. In-situ, the transition may be gradual.

DEPTH (FT.)
1
2
3
4
5
6
7
8
9
10
11

WATER LEVEL OBSERVATIONS
Not encountered

FIELD TEST RESULTS

PERCENT FINES

ATERBERG LIMITS

LOCATION
See Exploration Plan
Latitude: 43.5673° Longitude: -116.2387°

GRAPHIC LOG

WATER LEVEL OBSERVATIONS
Not encountered

FIELD TEST RESULTS

PERCENT FINES

ATERBERG LIMITS

LOCATION
See Exploration Plan
Latitude: 43.5673° Longitude: -116.2387°

TEAM CONSTRUCTION

11849 W Executive Dr, Ste G
Boise, ID

Hammer Type: Automatic

Advancement Method:
Hollow stem auger

Abandonment Method:
Boring backfilled with Auger Cuttings and/or Bentonite

Boring Started: 08-13-2019
Boring Completed: 08-13-2019

Drrl Rig: CME 75
Driller: HazTech

Project No.: 62185123

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were not determined.

Notes:
BORING LOG NO. B-3

PROJECT: Taxiway H Realignmnet
SITE: Boise Airport
Boise, ID

CLIENT: RS&H Inc
Salt Lake City, UT

LOCATION
See Exploration Plan
Latitude: 43.5666° Longitude: -116.2389°

DEPTH

0.5
FILL - SILT (ML), trace gravel, light brown

POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), light brown, dense

2.0
POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), gray and brown, very dense

11.4
Boring Terminated at 11.4 Feet

DEPTH (FT.)
WATER LEVEL OBSERVATIONS

FIELD TEST RESULTS

PERCENT FINES

WATER CONTENT (%)

DRY UNIT WEIGHT (pcf)

ATTERBERG LIMITS

Luke-Pl-PI

Gravin-

NP

6

Notes:

Advancement Method:
Hollow stem auger

Abandonment Method:
Boring backfilled with Auger Cuttings and/or Bentonite

See Explorations and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

Elevations were not determined.

Boring Started: 08-13-2019

Boring Completed: 08-13-2019

Drill Rig: CME 75
Driller: HazTech
Project No.: 62185123

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 62185123 TAXIWAY H REALIGNMENT GP-GM 08-13-2019

ATTENTION: FB 20-207 Addendum 1 (E) (RES-153-20; FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife

Packet Pg. 685
**GRAIN SIZE DISTRIBUTION**

ASTM D422 / ASTM C136

---

**COBBLES**

- **USCS Classification**: SILT with GRAVEL (ML)

**Boring ID**

- B-1: Depth 3 - 5

**USCS Classification**

- SILT with GRAVEL (ML)

**WC (%)**

- 41

**LL**

- 27

**PI**

- 14

**Cc**

- NP

**Cu**

- NP

**%Clay**

- 0.57

**%Fines**

- 40.65

---

**GRAVEL**

- **USCS Classification**: COBBLE

**Boring ID**

- B-1: Depth 3 - 5

**D<sub>100</sub>**

- 25

**D<sub>60</sub>**

- 7.71

**D<sub>30</sub>**

- 0.913

**D<sub>10</sub>**

- 0.19

**%Cobbles**

- 51.4

**%Gravel**

- 42.8

**%Silt**

- 5.8

---

**SAND**

- **USCS Classification**: COARSE

**Boring ID**

- B-1: Depth 3 - 5

**D<sub>100</sub>**

- 25

**D<sub>60</sub>**

- 7.71

**D<sub>30</sub>**

- 0.913

**D<sub>10</sub>**

- 0.19

**%Cobbles**

- 13.9

**%Gravel**

- 1.1

**%Silt**

- 84.9

---

**SILT OR CLAY**

- **USCS Classification**: POORLY GRADED GRAVEL with SILT and SAND (GP-GM)

**Boring ID**

- B-3: Depth 5 - 6.5

**D<sub>100</sub>**

- 25

**D<sub>60</sub>**

- 7.71

**D<sub>30</sub>**

- 0.913

**D<sub>10</sub>**

- 0.19

**%Cobbles**

- 51.4

**%Gravel**

- 42.8

**%Silt**

- 5.8

---

**PROJECT**: Taxiway H Realignment

**SITE**: Boise Airport

**CLIENT**: RS&H Inc

**PROJECT NUMBER**: 62185123

---

**LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT.**

---

**Packet Pg. 686**

---

**Attachment**: FB 20-207 Addendum 1 (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife
Source of Material
B-1 @ 3.0001 - 5.0001 feet
SILT with GRAVEL (ML)

Description of Material
REMARKS:

Test Method
ASTM D1557 Method C

TEST RESULTS
Maximum Dry Density 102.3 PCF
Optimum Water Content 20.4 %
Percent Fines 84.9 %

ATTERBERG LIMITS

<table>
<thead>
<tr>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>27</td>
<td>14</td>
</tr>
</tbody>
</table>
**CALIFORNIA BEARING RATIO**

**ASTM D1883-07²**

**Source of Material**: B-1 3.0

**Description of Material**: SILT with GRAVEL(ML)

**Remarks:**

**Percent Fines**: 84.9%

**Atterberg Limits**

- **LL**: 41
- **PL**: 27
- **PI**: 14

**Sample No.**

<table>
<thead>
<tr>
<th>Sample Condition</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soaked</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Compaction Method**: ASTM 1557C

**Maximum Dry Density, (pcf)**

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>102.3</td>
<td>102.3</td>
<td>102.3</td>
</tr>
</tbody>
</table>

**Optimum Moisture Content, (%)**

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20.4</td>
<td>20.4</td>
<td>20.4</td>
</tr>
</tbody>
</table>

**Dry Density before Soaking, (pcf)**

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>89.35</td>
<td>96.98</td>
<td>102.63</td>
</tr>
</tbody>
</table>

**Moisture Content, (%)**

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>After Compaction</th>
<th>Top 1&quot; After Soaking</th>
<th>Surcharge, (lbs)</th>
<th>Swell, (%)</th>
<th>Bearing Ratio, (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20.6</td>
<td>31.7</td>
<td>10.00</td>
<td>1.38</td>
<td>4.9</td>
</tr>
<tr>
<td>2</td>
<td>20.8</td>
<td>30.3</td>
<td>10.00</td>
<td>1.00</td>
<td>13.2</td>
</tr>
<tr>
<td>3</td>
<td>20.4</td>
<td>23.7</td>
<td>10.00</td>
<td>0.26</td>
<td>46.6</td>
</tr>
</tbody>
</table>

**Penetration Resistance (psi)**

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Dry Density @ 90%</th>
<th>Dry Density @ 95%</th>
<th>Dry Density @ 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>92.1 pcf</td>
<td>97.2 pcf</td>
<td>102.3 pcf</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CBR @ 90% Density**: 4.6

**CBR @ 95% Density**: 14.1

**CBR @ 100% Density**: 44.3

PROJECT: Taxiway H Realignment

SITE: Boise Airport

PROJECT NUMBER: 62185123

CLIENT: RS&H Inc

Packet Pg. 688

Attachment: FB 20-207 Addendum 1 (E) (RES-153-20 : FB 20-207; Realignment of Taxiway H Mill/Overlay Portions of Taxiways J & B, Knife
SUPPORTING INFORMATION
## Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests

### Coarse-Grained Soils: More than 50% retained on No. 200 sieve

<table>
<thead>
<tr>
<th>Gravels: More than 50% of coarse fraction retained on No. 4 sieve</th>
<th>Clean Gravels: Less than 5% fines</th>
<th>Gravels with Fines: More than 12% fines</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cu ≥ 4 and 1 ≤ Cc ≤ 3</td>
<td>Fines classify as ML or MH</td>
</tr>
<tr>
<td></td>
<td>Cu &lt; 4 and/or 1 &gt; Cc &gt; 3</td>
<td>Fines classify as CL or CH</td>
</tr>
</tbody>
</table>

### Sands: 50% or more of coarse fraction passes No. 4 sieve

<table>
<thead>
<tr>
<th>Clean Sands: Less than 5% fines</th>
<th>Gravels with Fines: More than 12% fines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cu ≥ 6 and 1 ≤ Cc ≤ 3</td>
<td>Fines classify as ML or MH</td>
</tr>
<tr>
<td>Cu &lt; 6 and/or 1 &gt; Cc &gt; 3</td>
<td>Fines classify as CL or CH</td>
</tr>
</tbody>
</table>

### Fine-Grained Soils: 50% or more passes the No. 200 sieve

<table>
<thead>
<tr>
<th>Silts and Clays: Liquid limit less than 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inorganic: PI &gt; 7 and plots on or above “A” line</td>
</tr>
<tr>
<td>Organic: Liquid limit - oven dried</td>
</tr>
<tr>
<td>Liquid limit - not dried</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silts and Clays: Liquid limit 50 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inorganic: PI plots on or above “A” line</td>
</tr>
<tr>
<td>Organic: Liquid limit - oven dried</td>
</tr>
<tr>
<td>Liquid limit - not dried</td>
</tr>
</tbody>
</table>

### Highly organic soils: Primarily organic matter, dark in color, and organic odor

| PI plots on or above “A” line | PT Peat |

---

- **A** Based on the material passing the 3-inch (75-mm) sieve.
- **B** If field sample contained cobbles or boulders, or both, add “with cobbles or boulders, or both” to group name.
- **C** Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
- **D** Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.
- **E** Cu = \( \frac{D_{30}^2}{D_{10} \times D_{60}} \)
- **F** If soil contains ≥ 15% sand, add “with sand” to group name.
- **G** If fines classify as CL-ML, use dual symbol GC-GM, or SC-SC.
- **H** If fines are organic, add “with organic fines” to group name.
- **I** If soil contains ≥ 15% gravel, add “with gravel” to group name.
- **J** If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
- **K** If soil contains 15 to 29% plus No. 200, add “with sand” or “with gravel,” whichever is predominant.
- **L** If soil contains ≥ 30% plus No. 200 predominantly sand, add “sandy” to group name.
- **M** If soil contains ≥ 30% plus No. 200 predominantly gravel, add “gravelly” to group name.
- **N** PI ≥ 4 and plots on or above “A” line.
- **O** PI < 4 or plots below “A” line.
- **P** PI plots on or above “A” line.
- **Q** PI plots below “A” line.
**Taxiway H Realignmnet**

**Boise, ID**

**Terracon Project No. 62185123**

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### WATER LEVEL

- Water Initially Encountered
- Water Level After a Specified Period of Time
- Water Level After a Specified Period of Time

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

### UNCONFINED COMPRRESSIVE STRENGTH

Unconfined Compressive Strength (Qu, (tsf))

### FIELD TESTS

- N: Standard Penetration Test Resistance (Blows/Ft.)
- (HP): Hand Penetrometer
- (T): Torvane
- (DCP): Dynamic Cone Penetrometer
- UC: Unconfined Compressive Strength
- (PID): Photo-Ionization Detector
- (OVA): Organic Vapor Analyzer

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### DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

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### LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

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### RELATIVE DENSITY OF COARSE-GRAINED SOILS

(50% or more passing the No. 200 sieve.) Density determined by Standard Penetration Resistance

<table>
<thead>
<tr>
<th>Descriptive Term (Density)</th>
<th>Standard Penetration or N-Value Blows/Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Loose</td>
<td>0 - 3</td>
</tr>
<tr>
<td>Loose</td>
<td>4 - 9</td>
</tr>
<tr>
<td>Medium Dense</td>
<td>10 - 29</td>
</tr>
<tr>
<td>Dense</td>
<td>30 - 50</td>
</tr>
<tr>
<td>Very Dense</td>
<td>&gt; 50</td>
</tr>
</tbody>
</table>

### CONSISTENCY OF FINE-GRAINED SOILS

(50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance

<table>
<thead>
<tr>
<th>Descriptive Term (Consistency)</th>
<th>Unconfined Compressive Strength Qu, (tsf)</th>
<th>Standard Penetration or N-Value Blows/Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Soft</td>
<td>less than 0.25</td>
<td>0 - 1</td>
</tr>
<tr>
<td>Soft</td>
<td>0.25 to 0.50</td>
<td>2 - 4</td>
</tr>
<tr>
<td>Medium Stiff</td>
<td>0.50 to 1.00</td>
<td>4 - 8</td>
</tr>
<tr>
<td>Stiff</td>
<td>1.00 to 2.00</td>
<td>8 - 15</td>
</tr>
<tr>
<td>Very Stiff</td>
<td>2.00 to 4.00</td>
<td>15 - 30</td>
</tr>
<tr>
<td>Hard</td>
<td>&gt; 4.00</td>
<td>&gt; 30</td>
</tr>
</tbody>
</table>

---

### RELATIVE PROPORTIONS OF SAND AND GRAVEL

<table>
<thead>
<tr>
<th>Descriptive Term(s) of other constituents</th>
<th>Percent of Dry Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trace</td>
<td>&lt;15</td>
</tr>
<tr>
<td>With</td>
<td>15-29</td>
</tr>
<tr>
<td>Modifier</td>
<td>&gt;30</td>
</tr>
</tbody>
</table>

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### RELATIVE PROPORTIONS OF FINES

<table>
<thead>
<tr>
<th>Descriptive Term(s) of other constituents</th>
<th>Percent of Dry Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trace</td>
<td>&lt;5</td>
</tr>
<tr>
<td>With</td>
<td>5-12</td>
</tr>
<tr>
<td>Modifier</td>
<td>&gt;12</td>
</tr>
</tbody>
</table>

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### GRAIN SIZE TERMINOLOGY

<table>
<thead>
<tr>
<th>Major Component of Sample</th>
<th>Particle Size</th>
<th>Term</th>
<th>Plasticity Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boulders</td>
<td>Over 12 in. (300 mm)</td>
<td>Non-plastic</td>
<td>0</td>
</tr>
<tr>
<td>Cobbleis Cotte</td>
<td>12 in. to 3 in. (300mm to 75mm)</td>
<td>Low</td>
<td>1 - 10</td>
</tr>
<tr>
<td>Gravel</td>
<td>3 in. to #4 sieve (75mm to 4.75 mm)</td>
<td>Medium</td>
<td>11 - 30</td>
</tr>
<tr>
<td>Sand</td>
<td>#4 to #200 sieve (4.75mm to 0.075mm)</td>
<td>High</td>
<td>&gt; 30</td>
</tr>
<tr>
<td>Silt or Clay</td>
<td>Passing #200 sieve (0.075mm)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### PLASTICITY DESCRIPTION

4.B.1.e

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Packet Pg. 691
Message:
You are hereby notified of the following changes and/or clarifications to the above referenced project.

The bid due date for this project has NOT changed. Bids are due 3/25/20 at 11:00am local time.

We will NOT be hosting a public bid opening. We will only be accepting emailed bids, hard copies will not be accepted. Bids are due to the Purchasing@cityofboise.org inbox by 3/25/20 at 11:00am. The subject line of the email shall read: BID FB 20-207 Realignment of Taxiway H and Mill/Overlay

All documents required at time of bidding shall be included as an attachment to the email.

This Addendum is hereby as of the above posted date made a part of the project requirements and contract documents for the referenced project. You are to note the receipt of, and compliance with this Addendum upon the space provided within the bid or proposal. Failure to acknowledge this Addendum does not relieve you from fulfilling the Addendum requirements. This is the only communication you will receive regarding this Addendum.

IF ALL PAGES WERE NOT RECEIVED OR THERE IS A PROBLEM WITH THE TRANSMITTAL, PLEASE CONTACT OUR OFFICE.
Message:
You are hereby notified of the following clarifications of and/or revisions to the Drawings and Specifications for the above referenced project.

Questions Submitted to Missy

Q1. Will aggregate for the temporary road be paid for under the P-154-5.1 item?
A1. Yes, the aggregate for the temporary road will be paid for under P-154-5.1.

Q2. Will the fabric for the temporary road be paid for under the P-152-5.2 item?
A2. Yes, the fabric for the temporary road be paid for under P-152-5.2.

Q3. When will Addendum #3 be issued?
A3. Addendum #3 will be issued on March 20, 2020.

Q4. Is a shuttlebuggy required for paving operations?
A4. MTV’s will be required which includes windrow elevators and surge volume and remixing MTV.

Q5. Are SIDA badges required for the Schedule 2 UPS work?
A5. GA badges will be required for all work on this project. SIDA delineation at UPS ramp will be modified by BOI so that SIDA badges won’t be required by contractor.

Attachments
- Addenda from Proposal Contract Documents and Technical Specifications as described in this addendum.
- Addenda from Plans as shown on attached 11” x 17” sheets.

This Addendum is hereby as of the above posted date made a part of the project requirements and contract documents for the referenced project. You are to note the receipt of, and compliance with this Addendum upon the space provided within the bid or proposal. Failure to acknowledge this Addendum does not relieve you from fulfilling the Addendum requirements. This is the only communication you will receive regarding this Addendum.

A. MODIFICATIONS TO CONTRACT DOCUMENTS & SPECIFICATIONS

1. PROPOSAL FORM. Updated pay items in Bid Form. REPLACE pages 12, 13, 14, 15, 16, 17 & 18 (7 pages) included in Addendum No. 3.

2. TECHNICAL SPECIFICATIONS. ITEM L-105 MODIFICATION, REMOVAL, AND DEMOLITION OF AIRFIELD LIGHTING SYSTEMS. SECTION 105-1.6 TEMPORARY PROTECTION. ADD paragraphs i, j, k, l & m.

3. TECHNICAL SPECIFICATIONS. ITEM L-105 MODIFICATION, REMOVAL, AND DEMOLITION OF AIRFIELD LIGHTING SYSTEMS. SECTION 105-2.4 REMOVAL WORK. MODIFY paragraph 2.

4. TECHNICAL SPECIFICATIONS. ITEM L-109 AIRPORT TRANSFORMER VAULT AND EQUIPMENT. MODIFY Item L109-7.2 to read Furnish and Install ACE3 ALCMS/CCR Interface Unit Including Graphic Update – per lump sum.

5. TECHNICAL SPECIFICATIONS. ITEM L-110 AIRPORT UNDERGROUND ELECTRICAL DUCT BANKS AND CONDUITS. REPLACE pay Item L-110-5.3 with pay Item L-110-5.3a, Item L-110-5.3b and Item L-110-5.3c.

6. TECHNICAL SPECIFICATIONS. ITEM L-115 ELECTRICAL MANHOLES AND JUNCTION STRUCTURES. REMOVE Item L115-5.2 and renumber subsequent pay items.

7. TECHNICAL SPECIFICATIONS. ITEM L-115 ELECTRICAL MANHOLES AND JUNCTION STRUCTURES. MODIFY Item L115-5.5 (previously L115-5.6) to read Spacer Ring Adjustment for Existing L-867B Base Can – per each.

8. TECHNICAL SPECIFICATIONS. ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS. REPLACE Item L-125-5.8 with pay Item L-125-5.8a, Item L-125-5.8b, L-125-5.8c, L-125-5.8d and Item L-125-5.8e.

9. TECHNICAL SPECIFICATIONS. ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS. MODIFY Item L125-5.9 to read L-867 Base Can and Isolated Transformer for L-804 Elevated Runway Guard Light – per each.
10. TECHNICAL SPECIFICATIONS. ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS. ADD Item L125-5.10 L-804 Elevated Runway Guard Light Fixture (ADB Safegate L804RGL Code 44A474-4111) – per each.

B. MODIFICATIONS TO CONTRACT DRAWINGS

ADD Drawing Numbers E010 and E011.

REPLACE Drawing Numbers C002, C003, C010, C202, C503, E001, E101, E102, E202, E203, E204, E301, E303, E304, E305, E307, E308, E309 and E310 with the same drawings in Addendum No. 3.

Contractor shall install one insulated tracer wire in at least one duct of a ductbank that crosses pavement as directed in the field by engineer and is to be incidental ductbank bid items.

There is now a total of 82 plan sheets. The total sheet count in the title blocks will be changed from 80 to 82 in the Conformed Docs submittal.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description and Unit Price in Words</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Unit Price in Numbers</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-108-5.1</td>
<td>No. 8 AWG, 5kV, L824, Type C Cable, Installed in Trench, Duct Bank or Conduit at _______________ dollars and _______________ cents</td>
<td>14,050</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-108-5.2</td>
<td>No. 6 AWG, Solid, Bare Counterpoise Wire, Installed in Trench, Above the Duct Bank at _______________ dollars and _______________ cents</td>
<td>4,250</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-109-7.1</td>
<td>Installation of Equipment within Existing vault at _______________ dollars and _______________ cents</td>
<td>1</td>
<td>LS</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.1</td>
<td>Clear Existing Conduit, Remove Existing Cables at _______________ dollars and _______________ cents</td>
<td>5,900</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.2</td>
<td>Removal of Cable and Conduit at _______________ dollars and _______________ cents</td>
<td>2,650</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.3a</td>
<td>Concrete-Encased, 1-Way, 2-Inch PVC Conduit, Schedule 40 at _______________ dollars and _______________ cents</td>
<td>330</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.3b</td>
<td>CLSM Encased, 1-Way, 2-Inch PVC Conduit, Schedule 40 at _______________ dollars and _______________ cents</td>
<td>2110</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
<td>Unit</td>
<td>Unit Price in Numbers</td>
<td>Total Amount</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>-----------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>L-110-5.3c</td>
<td>Direct Earth Buried, 1-Way, 2-Inch PVC Conduit, Schedule 40 at __________________________ dollars and __________________________ cents</td>
<td>70</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.4</td>
<td>Concrete-Encased, 3-Way, 3-Inch PVC Conduit, Schedule 40 at __________________________ dollars and __________________________ cents</td>
<td>310</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.5</td>
<td>Concrete-Encased, 4-Way, 4-Inch PVC Conduit, Schedule 80 at __________________________ dollars and __________________________ cents</td>
<td>330</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.6</td>
<td>Concrete-Encased Existing 2-Way, 4-Inch PVC Conduit, Schedule 40 __________________________ dollars and __________________________ cents</td>
<td>85</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.7</td>
<td>Concrete Encase Existing 4-Way, 5-Inch PVC Conduit at __________________________ dollars and __________________________ cents</td>
<td>235</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.8</td>
<td>Concrete Encase Existing 1-Way, 3-Inch PVC Conduit at __________________________ dollars and __________________________ cents</td>
<td>190</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-110-5.9</td>
<td>Removal of Miscellaneous Concrete Duct Banks at __________________________ dollars and __________________________ cents</td>
<td>520</td>
<td>LF</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
<td>Unit</td>
<td>Unit Price in Numbers</td>
<td>Total Amount</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>L-115-5.1</td>
<td>Electrical Handhole, 4’x4’x4’, Aircraft Rated at ____________________ dollars and ____________________ cents</td>
<td>5</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-115-5.2</td>
<td>L-867B Base Can in New Asphalt Pavement at ____________________ dollars and ____________________ cents</td>
<td>20</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-115-5.3</td>
<td>L-867B Base Can in Existing Pavement at ____________________ dollars and ____________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-115-5.4</td>
<td>New 3/8” Cover Plate and Bolts for Existing L-867B Base Can at ____________________ dollars and ____________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-115-5.5</td>
<td>Spacer Ring Adjustment for Existing L-867B Base Can at ____________________ dollars and ____________________ cents</td>
<td>2</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-125-5.1</td>
<td>L-861T(L) Taxiway Elevated Edge Light on New L-867 B Light Base in New Pavement at ____________________ dollars and ____________________ cents</td>
<td>21</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>L-125-5.2</td>
<td>L-861T(L) Taxiway Elevated Edge Light on New 12” L-867B Light Base in New Pavement at ____________________ dollars and ____________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
<td>Unit</td>
<td>Unit Price in Numbers</td>
<td>Total Amount</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>-----------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>L-125-5.3</td>
<td>L-861T Elevated Taxiway Edge Light on New L-867 Light Base in New Pavement at ________________ dollars and _________________________ cents</td>
<td>8</td>
<td>EA</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-125-5.4</td>
<td>L-861T Elevated Taxiway Edge Light on Existing L-867B Light Base with Risers at ________________ dollars and _________________________ cents</td>
<td>13</td>
<td>EA</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-125-5.5</td>
<td>L-862 Elevated Runway Edge Light on Adapter for Existing L-868B Light Base at ________________ dollars and _________________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-125-5.6</td>
<td>L-850C In-Pavement Runway Edge Light on New L-868B Light Base at ________________ dollars and _________________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-125-5.7</td>
<td>L-853 Elevated Taxiway Edge Retroreflective Marker at ________________ dollars and _________________________ cents</td>
<td>13</td>
<td>EA</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>L-125-5.8a</td>
<td>L-858(L) Guidance Sign, Size 1, 1 Module, on New Foundation at ________________ dollars and _________________________ cents</td>
<td>1</td>
<td>EA</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>Item No.</td>
<td>Item Description and Unit Price in Words</td>
<td>Estimated Quantity</td>
<td>Unit</td>
<td>Unit Price in Numbers</td>
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<td>L-125-5.8b</td>
<td>L-858(L) Guidance Sign, Size 1, 2 Module, on New Foundation at ___________________________________________ dollars and _______________________ cents</td>
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<td>L-125-5.8e</td>
<td>Remove and Relocate 2 Module Guidance Sign on New Foundation at ___________________________________________ dollars and _______________________ cents</td>
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<td>L-125-5.9</td>
<td>L-867 Base Can and Isolated Transformer for L-804 Elevated Runway Guard Light at _____________________ dollars and _______________________ cents</td>
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**TOTAL AMOUNT OF SCHEDULE I (FEDERAL) (IN WORDS):**

______________________________ DOLLARS

______________________________ CENTS

Total Schedule I (Federal) Amount: ________________

**NOTE: BID AWARD WILL BE MADE BASED ON THE LOWEST TOTAL AMOUNT FOR SCHEDULE I (FEDERAL)**
### CITY OF BOISE – BID SCHEDULE II (NON-FEDERAL)

**AIRPORT:** BOISE AIRPORT

**PROJECT:** REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY OF PORTIONS OF TAXIWAYS J AND B

**FAA AIP PROJ. NO.:** 3-16-0003-073-2020  
**CITY PROJ. NO.:** F/B 20-207  
**RS&H PROJECT NO.:** 225-0005-022

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<th>Total Amount</th>
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<td>P-101-5.9</td>
<td>Crack Repair at ________________________ dollars and ________________________ cents</td>
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<td>P-101-5.11</td>
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<td>P-109-5.1</td>
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<td>ISPWC 802-4.1.A.1</td>
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<td>L-109-7.2</td>
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<td>LS</td>
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<tr>
<td>L-125-5.10</td>
<td>L-804 Elevated Runway Guard Light Fixture (ADB Safegate L804RGL Code 44A474-4111) at ______________________ dollars and ______________________ cents</td>
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TOTAL AMOUNT OF SCHEDULE II (NON-FEDERAL) (IN WORDS):

______________________________________________ DOLLARS

____________________ CENTS

Total Schedule II (Non-Federal) Amount: _______________

NOTE: BID AWARD WILL BE MADE BASED ON THE LOWEST TOTAL AMOUNT FOR SCHEDULE I (FEDERAL)
ITEM L-105 MODIFICATION, REMOVAL, AND DEMOLITION OF AIRFIELD LIGHTING SYSTEMS

GENERAL

105-1.1 Definitions.

a. Modification shall mean any change or rearrangement in the component parts, including structural, mechanical, electrical systems, or internal or external arrangements of existing equipment or structures.

b. Removal shall mean the dismantling of existing materials, components, equipment, and utilities. Removal of existing equipment, etc., shall be performed carefully to prevent damage to existing equipment. Removed items not to be reinstalled shall be delivered and turned over to airport maintenance, unless otherwise directed by the RPR, in which case these items shall be disposed of off airport property at the Contractor’s expense.

c. Demolition shall mean the dismantling and disposal of existing materials, components, equipment, and utilities which cannot or will not be reused or which will have no salvage value, or which cannot be reused due to unrepairable damage caused by age, non-demolition related reasons, etc. All demolished items not designated to be turned over to the Owner shall be disposed of in a safe manner and at a location acceptable to the Owner.

105-1.2 General. All items to be turned over to the Owner shall be properly enclosed or boxed to protect the items from damage and transported by the Contractor to a location on the Owner’s property, designated by the Engineer and/or the Owner.

The installation and/or removal of lighting equipment may be critical to airport operations; therefore, the Contractor shall follow the work schedule established in the plans and specifications or as directed by the Engineer. The system shall be installed in accordance with the National Electrical Code and/or local code requirements.

The Contractor shall provide temporary wiring as required to reconnect existing circuits to provide guidance for aircraft to pass through the construction areas on those taxiways/runways which must remain open. The Contractor shall check all temporary circuits before dark each day to assure that they are operational. In the event of failure, the Contractor shall immediately take steps to restore operation.

105-1.3 Condition of Existing Facilities. The Contractor shall verify the areas, conditions, and features necessary to tie into existing construction. This verification shall be done prior to submittal of shop drawings, fabrication or erection, construction or installation. The Contractor shall be responsible for the accurate tie-in of the new work to existing facilities.

Special attention is called to the fact that there may be conduit, cable, fixtures or other items in the existing systems which must be removed or relocated in order to perform the modification work. All conduit, wiring, boxes, etc., that do not comply with the contract documents shall be removed or corrected to comply with the contract documents. All unused conduit not removed shall be identified and a pull line shall be installed. The work shall include all removal and relocation required for completion of the modifications and the new construction.

105-1.4 Safety Requirements. The Contractor shall conduct alterations and removal operations in a manner that will ensure the safety of persons in accordance with the requirements of CFR 29 PART 1926 and 1910.
As a minimum, work place safety shall comply with NFPA 70E, OSHA, federal, state and local requirements. Where a conflict occurs, the most stringent requirement shall govern.

The Contractor shall comply with the Construction Safety and Phasing Plan (CSPP).

105-1.5 Classification of Removed/Demolished Items. Existing materials and equipment indicated to be removed will be classified as "salvageable" and shall remain the property of the Owner or will be classified as "debris" and shall be disposed of legally off the airport.

Reusable salvaged items - Salvaged materials and equipment shall be reused in the work as described on the contract drawings, unless noted otherwise.

Retained salvaged items - Salvaged materials and equipment to be retained by the Owner but not reused in the work shall be turned over to the Owner at a site at the facility to be determined by the Owner. Retained salvaged items shall be stored on Owner property where indicated by the Owner.

Items classified as debris shall be legally disposed of off the airport property. The cost of such disposal shall be included in the cost of other items of work.

105-1.6 Temporary Protection. The Contractor shall provide and maintain the following requirements:

a. Protection of persons and property shall be provided throughout the progress of the work in accordance with the contract documents.

b. Provide temporary enclosures and partitions prior to starting modification and removal/demolition work. Such items shall protect existing materials, equipment, and other remaining building or system components from damage by weather and construction operations. Temporary enclosures shall isolate space utilized by equipment during construction, from dirt, dust, noise, and unauthorized entry.

c. Provide temporary exits, entrances, and protected passages where work prevents the use of existing facilities.

d. Provide weathertight temporary enclosures over and around openings to be made to existing exteriors of facilities prior to the start of work. The Contractor shall maintain such temporary enclosures until new construction will protect the interior of existing facilities from the elements.

e. Provide temporary exterior wall construction which will be designed and fabricated to resist an applied horizontal wind pressure of not less than 130 mph.

f. Provide temporary exterior roof construction which will be capable of supporting an applied vertical live load of not less than 200 psf, uniformly distributed over the entire roof area.

g. Design and fabricate temporary enclosures to maintain temperatures inside the existing facilities within a range of plus-or-minus 5 degrees F of normal operating conditions.

h. Provide temporary jet blast structures which will withstand the jet blast with a safety factor of 2.

i. Where elevated light fixtures have been removed and the base can is to remain for a new or reinstalled light fixture, a temporary 5/8-inch thick plywood cover shall be provided to keep debris from entering the base can.

j. Where elevated light fixtures have been removed and the base can is to remain without a fixture, a permanent 3/8-inch thick steel cover plate with new gasket, washers and stainless-steel bolts shall be provided.
k. Where in-pavement light fixtures and the top can sections have been removed and the bottom can section is to remain for a new or reinstalled light fixture, a temporary 5/8-inch thick plywood cover and 1/8-inch thick mudplate shall be provided to allow for milling and paving operations.

l. Where in-pavement fixtures have been removed and the base can is to remain without a fixture, a permanent 3/4-inch thick steel cover plate with new gasket, locking washers and stainless-steel bolts shall be provided.

m. Where light fixtures are identified to be removed, the isolation transformers shall also be removed and included in the cost of the removal of the fixture.

**EXECUTION**

105-2.1 Disconnecting Utilities. Prior to the start of work, the necessary utilities serving each area of modification, removal, or demolition will be shut off by the Owner and shall be disconnected and sealed by the Contractor, as required. Lockout/Tag/Try procedures shall be utilized in accordance with airport approved procedures.

Prior to the disconnection, interruption or removal of any circuit supplying power to an FAA owned and maintained facility, the Contractor must notify the local FAA or authorized representative 48 hours in advance and be granted permission.

105-2.2 Temporary Utility Services. The Contractor shall install temporary utility services in satisfactory operating condition before disconnecting existing utilities. Such temporary services shall be maintained during the period of construction and removed only after new permanent services have been tested and are in operation.

105-2.3 Temporary Airport Lighting Systems. The Contractor shall maintain the airport lighting systems during the various phases of the work as shown on the phasing plan(s) or as directed by the Engineer. The Contractor shall be responsible for all temporary connections in the field or at the regulator necessary for operation of the circuits during construction. All existing electrical equipment and lighting systems shall be kept in operation, unless prior approval of the Engineer has been received and as otherwise specified below and on the Drawings. The Contractor may use salvaged materials for temporary construction where required. The permission for temporary work and using salvaged materials shall be obtained from the Engineer. Lighting for active runway and taxiway surfaces shall be maintained at all times. Temporary electrical fixtures and conductors are allowable when necessary, but shall be installed as follows:

a. Temporary lights shall be bolted to the pavement in a manner rendering the light stationery and allowing space for conductors to enter or exit and to be spliced.

b. When the above is not practical, lights shall be fastened to a weighted object adaptable for the purpose and of sufficient weight to inhibit movement by jet engine blast.

c. Temporary conductors supplying temporary lights shall be installed in a rigid galvanized steel conduit system and secured every five feet to prevent movement by jet engine blast. Conduit shall comply with Item L-110.

d. All joints or splices in temporary conductors shall have heat shrink tubing with integral sealant applied to secure mechanical and electrical connection and prevent water entry.

e. All plug-in connections shall have heat shrink tubing with integral sealant applied to prevent accidental disconnection and shall be color code taped to expedite quick, efficient disconnection and
restoration.

Temporary airfield lighting and signage shall conform as closely as possible to permanent locations normally on the taxiway or runway and that shall guide aircraft in a safe path away from all possible accident prone areas.

Closed taxiways and runways shall be so marked in a manner acceptable to FAA and the Owner and said marking shall be kept in acceptable condition. This item shall include, at the Engineer’s discretion the temporary removal or covering of airfield signage.

**CAUTION:** The series lighting circuit must always be complete before a regulator is energized. Normal circuit voltage is less than 5,000 volts, open circuit voltage can be more than 10,000 volts. All personnel shall be instructed to protect the integrity of the lighting circuit. Turn off, lock out and tag the constant current regulator at the vault before opening the circuit. Continuity of the circuit shall be checked before the regulator is reconnected and reenergized.

The installation and/or removal of lighting equipment may be critical to airport operations; therefore, the Contractor shall follow work schedules established in the plans and specifications or as directed by the Engineer. The temporary system shall be installed in accordance with the contract documents, FAA Advisory Circulars and if applicable the National Electrical Code and/or local code requirements.

The Contractor shall provide temporary wiring as required to reconnect existing airfield lighting and signage to provide guidance for aircraft to pass through the construction areas on those taxiways/runways, which must remain open. Cable shall comply with Item L-108.

It shall be the Contractor’s responsibility to determine that all airfield lighting circuits, except those that are serving closed taxiways or runways, are completely operational, using tower controls (if applicable), at the end of each work shift and shall so certify to the Engineer before leaving the work site. Day shift report of system operation shall be at 4 p.m. Second shift report shall be 1 hour before dark. Any other shift shall report 1 hour prior to the need for airfield lighting or as determined by the Engineer. Should bad weather cause poor visibility, the Engineer may require additional status reports of system operability and may call for the operation of the lighting system at any time. In the event of lighting system failure, the Contractor shall immediately take the necessary steps to restore proper operation.

Whenever the scope of work requires connection to an existing circuit, the circuit’s insulation resistance shall be tested, in the presence of the Engineer. This test shall be performed in accordance with paragraph L-108-2.2.11 prior to any activity affecting the respective circuit. The Contractor shall record the results. When the circuit is returned to its final condition, the circuit’s insulation resistance shall be checked again in the presence of the Engineer. The Contractor shall record the results. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs, to the circuit, to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, etc. if necessary, shall be borne by the Contractor. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.

**105-2.4 Removal Work.** The Contractor shall not disturb the existing construction beyond that indicated or necessary for installation of new work. Temporary shoring and bracing for support of building components to prevent settlement or other movement shall be as indicated and as required to protect the work.

The Contractor shall provide protective measures to control accumulation and migration of dust and dirt in all areas of work, particularly those adjacent to occupied areas. The Contractor shall remove dust, dirt, and debris from the areas of work daily. Where light fixtures are identified be removed, the isolation transformers shall also be removed and included in the cost of the removal of the fixture.
105-2.5 Backfilling for Removal of Light Bases and Equipment Foundations. After a light base or equipment foundation has been removed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the Engineer.

Where required, the Engineer may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

Where light bases or equipment foundations have been removed from existing pavement to remain, the void shall be filled with P-610 concrete.

105-2.6 Salvageable Materials and Equipment. The Contractor shall remove all salvageable materials and equipment in a manner that will cause the least possible damage thereto. Removed items which are to be retained by the Owner shall be carefully handled, stored, and protected.

The Contractor shall provide identification tags on all items boxed or placed in containers, indicating the type, size, and quantity of materials.

DEMOLITION

105-3.1 Demolition Operations. Demolition operations shall be conducted to ensure the safe passage of persons to and from facilities occupied and used by the Owner and to prevent damage by falling debris or other cause to adjacent buildings, structures, and other facilities.

The sequence of operations shall be such that maximum protection from inclement weather will be provided for materials and equipment located in partially dismantled structures.

105-3.2 Maintaining Traffic. Demolition operations and removal of debris to disposal areas shall be conducted to ensure minimum interference with runways, taxiways, aprons, roads, streets, walks, and other facilities occupied and used by the Owner.

Streets, walks, runways, taxiways and other facilities occupied and used by the Owner shall not be closed or obstructed without written permission from the Owner.

105-3.3 Reference Standards Requirements. Demolition operations shall be conducted to ensure the safety of persons in accordance with ANSI A 10.6 Safety Requirements for Demolition.

Demolition shall be conducted in accordance with OSHA, state and local requirements.

DISPOSAL OF DEMOLISHED MATERIALS

105-4.1 General. The Contractor shall dispose of debris, rubbish, scrap, and other non-salvageable materials resulting from demolition operations. Demolished materials shall not be stored or disposed of on airport property.

105-4.2 Disposal of Debris. Materials classified as debris shall be transported from Owner property and legally disposed of at no additional cost to the Owner. Permits and fees for disposal shall be paid by the Contractor.
MODIFICATION WORK

105-5.1 General. Cutting, patching, repairing, and other modifications work shall be done by tradesman skilled in the particular trade or work required.

Where required to patch or extend existing construction, or both, such modifications shall match existing exposed surface materials in finish, color, texture, and pattern.

Salvaged items for reuse shall be as approved by the Engineer and Owner.

METHOD OF MEASUREMENT

105-6.1 Temporary airport lighting systems will be measured for payment on a lump sum basis. Work for this item shall include temporary equipment, cables, conduit, and connections required to keep the airfield lighting systems operational during construction. This item shall also include the removal of the items when no longer needed and restoration to original conditions.

105-6.2 Measurement for removal or demolition of airfield lights, guidance signs, reflectors, handholes and junction cans will be per each for the quantity removed or demolished. Measurement for this item will also include the removal of the light base, foundation and site restoration.

BASIS OF PAYMENT

105-7.1 Payment will be made at the contract lump sum price for Temporary Airport Lighting Systems. This price shall be full compensation for temporary jumpers, connections, conduit, and for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with the provisions and intent of the plans and specifications.

105-7.2 Payment will be made at the contract unit price for each airfield light, reflector, guidance sign, handhole or junction can removed or demolished. This price shall be full compensation for the disconnection from the electrical system, removing and disposing of all materials, site restoration, and for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with the provisions and intent of the plans and specifications. This payment shall also include the transportation of salvaged materials to the Owner’s designated location.

Payment will be made under:

- Item L-105-7.1 Temporary Airfield Lighting - per lump sum
- Item L-105-7.2 Removal of Guidance Sign and Foundation - per each
- Item L-105-7.3 Removal of Elevated Taxiway Edge Light and Base - per each
- Item L-105-7.4 Removal of Elevated Taxiway Edge Light, Base to Remain – per each
- Item L-105-7.5 Removal of In-Pavement Runway Edge Light, Base to Remain - per each
- Item L-105-7.6 Removal of In-Pavement Runway Edge Light and Base - per each
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<td>Removal of Retroreflective Taxiway Edge Marker - per each</td>
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<td>Removal of Surface Mounted Taxiway Centerline Retroreflective Marker - per each</td>
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<td>Item L-105-7.10</td>
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<td>Item L-105-7.11</td>
<td>Removal of Electrical Handhole - per each</td>
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**END OF ITEM L-105**
ITEM L-109 AIRPORT TRANSFORMER VAULT AND VAULT EQUIPMENT

DESCRIPTION

109-1.1 This item shall consist of removing an existing airport transformer vault and equipment and constructing an airport transformer vault or a prefabricated metal housing per these specifications and per the design and dimensions shown in the plans. This work shall also include the installation of conduits in the floor and foundation, painting and lighting of the vault or metal housing, and the furnishing of all incidentals that are necessary to produce a completed unit. Included as a separate part under this item or as a separate item where an existing vault is to be used shall be the furnishing of all vault equipment, wiring, electrical buses, cable, conduit, potheads, and grounding systems. This work shall also include the painting of equipment and conduit; the marking and labeling of equipment and the labeling or tagging of wires; the testing of the installation; and the furnishing of all incidentals necessary to place it in operating condition as a completed unit to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

109-2.1 General.

a. Airport lighting equipment and materials covered by advisory circulars (AC) shall be certified in AC 150/5345-53, Airport Lighting Equipment Certification Program (ALECP) and listed in the ALECP Addendum.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer’s certification of compliance with the applicable specification when requested by the RPR.

c. Manufacturer’s certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor’s cost.

d. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

e. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be provided in electronic pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner.
CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING

109-3.1 Electrical vault building. Not used.

109-3.2 Concrete. Not used.

109-3.3 Precast concrete structures. Not used.

109-3.4 Reinforcing steel. Not used.

109-3.5 Brick. Not used.

109-3.6 Rigid steel conduit. Rigid steel conduit and fittings shall be per Underwriters Laboratories Standards 6 and 514B.

109-3.7 Plastic Conduit and fittings. Plastic Conduit and fittings shall conform to the requirements of UL-651 and UL-654 schedule 40 polyvinyl chloride (PVC) suitable for use above or below ground.

109-3.8 Lighting. Not used.

109-3.9 Outlets. Not used.

109-3.10 Switches. Not used.

109-3.11 Paint.
   a. Priming paint for non-galvanized metal surfaces shall be a high solids alkyd primer compatible with the manufacturer’s recommendations for the intermediate or topcoat.
   b. White paint for body and finish coats on metal and wood surfaces shall be ready-mixed paint conforming to the Master Painter’s Institute (MPI), Reference #9, Exterior Alkyd, Gloss.
   c. Priming paint for wood surfaces shall be mixed on the job by thinning the specified white paint by adding 1/2 pint of raw linseed oil to each gallon.
   d. Paint for the floor, ceiling, and inside walls shall be per Porter Paint Company 69, 71, and 79 or equivalent. Walls and ceiling shall be light gray and the floor shall be medium gray.
   e. The roof coating shall be hot asphalt material per ASTM D2823. Asbestos-free roof coating per ASTM D4479 may be substituted if required by local codes.

109-3.12 Ground bus. Not used.

109-3.13 Square duct. Not used.


109-3.15 Vault prefabricated metal housing. Not used.

109-3.16 FAA-approved equipment. Certain items of airport lighting equipment installed in vaults are covered by individual ACs listed below:

   AC 150/5345-3 Specification for L-821, Panels for Remote Control of Airport Lighting
   AC 150/5345-5 Circuit Selector Switch
   AC 150/5345-7 Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
   AC 150/5345-10 Specification for Constant Current Regulators and Regulator Monitors
109-3.17 Other electrical equipment. Distribution transformers, oil switches, cutouts, relays, terminal blocks, transfer relays, circuit breakers, and all other regularly used commercial items of electrical equipment not covered by FAA equipment specifications and ACs shall conform to the applicable rulings and standards of the Institute of Electrical and Electronic Engineers (IEEE) or the National Electrical Manufacturers Association (NEMA). When specified, test reports from a testing laboratory indicating that the equipment meets the specifications shall be supplied. In all cases, equipment shall be new and a first-grade product. This equipment shall be supplied in the quantities required for the specific project and shall incorporate the electrical and mechanical characteristics specified in the proposal and plans. Equipment selected and installed by the Contractor shall maintain the interrupting current rating of the existing systems or specified rating whichever is greater.

109-3.18 Wire. Wire (in conduit) rated up to 5,000 volts shall be per AC 150/5345-7, Specification for L-824 Underground Electrical Cables for Airport Lighting Circuits. For ratings up to 600 volts, moisture and heat resistant thermoplastic wire conforming to Commercial Item Description A-A-59544A Type THWN-2 shall be used. The wires shall be of the type, size, number of conductors, and voltage shown in the plans or in the proposal.

a. Control circuits. Unless otherwise indicated on the plans, wire shall be not less than No. 12 American wire gauge (AWG) and shall be insulated for 600 volts. If telephone control cable is specified, No. 19 AWG telephone cable per ANSI/Insulated Cable Engineers Association (ICEA) S-85-625 specifications shall be used.

b. Power circuits.

(1) 600 volts maximum – Wire shall be No. 6 AWG or larger and insulated for at least 600 volts.

(2) 3,000 volts maximum – Wire shall be No. 6 AWG or larger and insulated for at least 3,000 volts.

(3) Over 3,000 volts-Wire shall be No. 6 AWG or larger and insulated for at least the circuit voltage.

109-3.19 Short circuit / coordination / device evaluation / arc flash analysis. The Contractor shall, based upon the equipment provided, include as a part of the submittal process the electrical system “Short Circuit / Coordination / Device evaluation / Arc Flash Analysis”. The analysis shall be performed by the equipment manufacturer and submitted in a written report. The analysis shall be signed and sealed by a registered professional Engineer from the state in which the project is located. The analysis shall comply with NFPA-70E and IEEE 1584.

The analysis will include: one line diagrams, short circuit analysis, coordination analysis, equipment evaluation, arc flash analysis and arc flash labels containing at a minimum, equipment name, voltage/current rating, available incident energy and flash protection boundary.

The selected firms field service Engineer shall perform data gathering for analysis completion and device settings, perform device setting as recommended by the analysis and will furnish and install the arc flash labels. The components worst case incident energy will be considered the available arc flash energy at that specific point in the system. Submit three written copies and one electronic copy of the report.
CONSTRUCTION METHODS

CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING

109-4.1 General. Not used.
109-4.2 Foundation and walls.
   c. Concrete masonry construction. Not used.
109-4.3 Roof. Not used.
109-4.4 Floor. Not used.
109-4.5 Floor drain. Not used.
109-4.6 Conduits in floor and foundation. Not used.
109-4.7 Doors. Not used.
109-4.8 Painting. Not used.
109-4.9 Lights and switches. Not used.

INSTALLATION OF EQUIPMENT IN VAULT OR PREFABRICATED METAL HOUSING

109-5.1 General. The Contractor shall furnish, install, and connect all equipment, equipment accessories, conduit, cables, wires, buses, grounds, and support necessary to ensure a complete and operable electrical distribution center for the airport lighting system as specified herein and shown in the plans. When specified, an emergency power supply and transfer switch shall be provided and installed. The equipment installation and mounting shall comply with the requirements of the National Electrical Code and local code agency having jurisdiction. All electrical work shall comply with the NEC and local code agency having jurisdiction including the separation of under 600V work from 5,000V work.

109-5.2 Power supply equipment. Transformers, regulators, booster transformers, and other power supply equipment items shall be furnished and installed at the location shown in the plans or as directed by the RPR. The power supply equipment shall be set on steel “H” sections, “I” beams, channels, or concrete blocks to provide a minimum space of 1-1/2 inch between the equipment and the floor. The equipment shall be placed so as not to obstruct the oil-sampling plugs of the oil-filled units; and nameplates shall, so far as possible, not be obscured.

If specified in the plans and specifications, equipment for an alternate power source or an emergency power generator shall be furnished and installed. The alternate power supply installation shall include all equipment, accessories, an automatic changeover switch, and all necessary wiring and connections. The emergency power generator set shall be the size and type specified.

109-5.3 Switchgear and panels. Oil switches, fused cutouts, relays, transfer switches, panels, panel boards, and other similar items shall be furnished and installed at the location shown in the plans or as directed by the RPR. Wall or ceiling mounted items shall be attached to the wall or ceiling with galvanized bolts of not less than 3/8-inch diameter engaging metal expansion shields or anchors in masonry or concrete vaults.
109-5.4 Duct and conduit. The Contractor shall furnish and install square-type exposed metallic ducts with hinged covers for the control circuits in the vault. These shall be mounted along the walls behind all floor-mounted equipment and immediately below all wall-mounted equipment. The hinged covers shall be placed to open from the front side with the hinges at the front bottom.

Wall brackets for square ducts shall be installed at all joints 2 feet or more apart with intermediate brackets as specified. Conduit shall be used between square ducts and equipment or between different items of equipment when the equipment is designed for conduit connection. When the equipment is not designed for conduit connection, conductors shall enter the square-type control duct through insulating bushings in the duct or on the conduit risers.

109-5.5 Wiring and connections. The Contractor shall make all necessary electrical connections in the vault per the wiring diagrams furnished and as directed by the RPR. In wiring to the terminal blocks, the Contractor shall leave sufficient extra length on each control lead to make future changes in connections at the terminal block. This shall be accomplished by running each control lead the longest way around the box to the proper terminal. Leads shall be neatly laced in place.

109-5.6 Marking and labeling. All equipment, control wires, terminal blocks, etc., shall be tagged, marked, or labeled as specified below:

a. Wire identification. The Contractor shall furnish and install self-sticking wire labels or identifying tags on all control wires at the point where they connect to the control equipment or to the terminal blocks. Wire labels, if used, shall be of the self-sticking preprinted type and of the manufacturer’s recommended size for the wire involved. Identification markings designated in the plans shall be followed. Tags, if used, shall be of fiber not less than 3/4 inch in diameter and not less than 1/32 inch thick. Identification markings designated in the plans shall be stamped on tags by means of small tool dies. Each tag shall be securely tied to the proper wire by a nonmetallic cord.

b. Labels. The Contractor shall stencil identifying labels on the cases of regulators, breakers, and distribution and control relay cases with white oil paint as designated by the RPR. The letters and numerals shall be not less than one inch in height and shall be of proportionate width. The Contractor shall also mark the correct circuit designations per the wiring diagram on the terminal marking strips, which are a part of each terminal block.

METHOD OF MEASUREMENT

109-6.1 Not used.

109-6.2 Not used.

109-6.3 The quantity of equipment to be paid for under this item shall consist of all equipment installed, connected and accepted as a complete unit ready for operation within an existing vault or prefabricated metal housing.

BASIS OF PAYMENT

109-7.1 Payment will be made at the contract unit price for each completed and accepted vault or prefabricated metal housing equipment installation. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item. The removal of the existing regulator shall also be included as part of this item.

Payment will be made under:

Item L-109-7.1 Installation of Equipment Within Existing Vault – per lump sum
Item L-109-7.2 Furnish and Install ACE3 ALCMS/CCR Interface Unit Including Graphic Update – per lump sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-30 Design and Installation Details for Airport Visual Aids
AC 150/5345-3 Specification for L-821, Panels for Remote Control of Airport Lighting
AC 150/5345-5 Circuit Selector Switch
AC 150/5345-7 Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-10 Specification for Constant Current Regulators and Regulator Monitors
AC 150/5345-13 Specification for L-841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport Lighting Circuits
AC 150/5345-49 Specification L-854, Radio Control Equipment;
AC 150/5345-53 Airport Lighting Equipment Certification Program

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSI/ICEA S-85-625 Standard for Telecommunications Cable Aircore, Polyolefin Insulated, Copper Conductor Technical Requirements

ASTM International (ASTM)

ASTM A615 Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM C62 Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
ASTM C90 Standard Specification for Loadbearing Concrete Masonry Units
ASTM D2823 Standard Specification for Asphalt Roof Coatings, Asbestos Containing
ASTM D4479 Standard Specification for Asphalt Roof Coatings – Asbestos-Free

Commercial Item Description (CID)

A-A 59544 Cable and Wire, Electrical (Power, Fixed Installation)
IEEE 1584 Guide for Performing Arc-Flash Hazard Calculations
Master Painter’s Institute (MPI)

MPI Reference #9 Alkyd, Exterior, Gloss (MPI Gloss Level 6)

Underwriters Laboratories (UL)

UL Standard 6 Electrical Rigid Metal Conduit – Steel
UL Standard 514B Conduit, Tubing, and Cable Fittings
UL Standard 514C Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 651 Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
UL Standard 651A Type EB and A Rigid PVC Conduit and HDPE Conduit

National Fire Protection Association (NFPA)

NFPA-70 National Electrical Code (NEC)
NFPA-70E Standard for Electrical Safety in the Workplace
NFPA-780 Standard for the Installation of Lightning Protection Systems

END OF ITEM L-109
ITEM L-110 AIRPORT UNDERGROUND ELECTRICAL DUCT BANKS AND CONDUITS

DESCRIPTION

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits and removal of existing duct banks. It shall also include all turfing trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

EQUIPMENT AND MATERIALS

110-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer’s certification of compliance with the applicable specification when requested by the RPR.

b. Manufacturer’s certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, that comply with these specifications, at the Contractor’s cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner.

110-2.2 Steel conduit. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be painted with a 10-mil thick coat of asphaltum sealer or shall have a factory-bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10
mils of asphaltum sealer. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer's written instructions. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth.

110-2.3 Plastic conduit. Plastic conduit and fittings—shall conform to the following requirements:

- UL 514B covers W-C-1094-Conduit fittings all types, classes 1 thru 3 and 6 thru 10.
- UL 514C covers W-C-1094- all types, Class 5 junction box and cover in plastic (PVC).
- UL 651 covers W-C-1094-Rigid PVC Conduit, types I and II, Class 4.
- UL 651A covers W-C-1094-Rigid PVC Conduit and high-density polyethylene (HDPE) Conduit type III and Class 4.

Underwriters Laboratories Standards UL-651 and Article 352 of the current National Electrical Code shall be one of the following, as shown on the plans:

a. Type I—Schedule 40 and Schedule 80 PVC suitable for underground use either direct-buried or encased in concrete.

b. Type II—Schedule 40 PVC suitable for either above ground or underground use.

c. Type III— Schedule 80 PVC suitable for either above ground or underground use either direct-buried or encased in concrete.

d. Type III— HDPE pipe, minimum standard dimensional ratio (SDR) 11, suitable for placement with directional boring under pavement.

The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.

110-2.4 Split conduit. Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

110-2.5 Conduit spacers. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high grade, high density polyethylene complete with interlocking cap and base pads. They shall be designed to accept No. 4 reinforcing bars installed vertically.

110-2.6 Concrete. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

110-2.7 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program. Precast concrete structures shall conform to ASTM C478.

110-2.8 Flowable backfill. Flowable material used to back fill conduit and duct bank trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

110-2.9 Detectable warning tape. Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches wide. Detectable tape is incidental to the respective bid item.

CONSTRUCTION METHODS

110-3.1 General. The Contractor shall install underground duct banks and conduits at the approximate locations indicated on the plans. The RPR shall indicate specific locations as the work progresses,
required to differ from the plans. Duct banks and conduits shall be of the size, material, and type indicated on the plans or specifications. Where no size is indicated on the plans or in the specifications, conduits shall be not less than 2 inches inside diameter or comply with the National Electrical Code based on cable to be installed, whichever is larger. All duct bank and conduit lines shall be laid so as to grade toward access points and duct or conduit ends for drainage. Unless shown otherwise on the plans, grades shall be at least 3 inches per 100 feet. On runs where it is not practicable to maintain the grade all one way, the duct bank and conduit lines shall be graded from the center in both directions toward access points or conduit ends, with a drain into the storm drainage system. Pockets or traps where moisture may accumulate shall be avoided. Under pavement, the top of the duct bank shall not be less than 18 inches below the subgrade; in other locations, the top of the duct bank or underground conduit shall be not less than 18 inches below finished grade.

The Contractor shall mandrel each individual conduit whether the conduit is direct-buried or part of a duct bank. An iron-shod mandrel, not more than 1/4 inch smaller than the bore of the conduit shall be pulled or pushed through each conduit. The mandrel shall have a leather or rubber gasket slightly larger than the conduit hole.

The Contractor shall swab out all conduits/ducts and clean base can, manhole, pull boxes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed the light bases, manholes, pull boxes, etc., and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be re-cleaned at the Contractor’s expense. All accessible points shall be kept closed when not installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

For pulling the permanent wiring, each individual conduit, whether the conduit is direct-buried or part of a duct bank, shall be provided with a 200-pound test polypropylene pull rope. The ends shall be secured and sufficient length shall be left in access points to prevent it from slipping back into the conduit. Where spare conduits are installed, as indicated on the plans, the open ends shall be plugged with removable tapered plugs, designed for this purpose.

All conduits shall be securely fastened in place during construction and shall be plugged to prevent contaminants from entering the conduits. Any conduit section having a defective joint shall not be installed. Ducts shall be supported and spaced apart using approved spacers at intervals not to exceed 5 feet.

Unless otherwise shown on the plans, concrete encased duct banks shall be used when crossing under pavements expected to carry aircraft loads, such as runways, taxiways, taxilanes, ramps and aprons. When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.
When rock is encountered, the rock shall be removed to a depth of at least 3 inches below the required conduit or duct bank depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch sieve. Flowable backfill may alternatively be used.

Underground electrical warning (Caution) tape shall be installed in the trench above all underground duct banks and conduits in unpaved areas. Contractor shall submit a sample of the proposed warning tape for approval by the RPR. If not shown on the plans, the warning tape shall be located 6 inches above the duct/conduit or the counterpoise wire if present.

Joints in plastic conduit shall be prepared per the manufacturer’s recommendations for the particular type of conduit. Plastic conduit shall be prepared by application of a plastic cleaner and brushing a plastic solvent on the outside of the conduit ends and on the inside of the couplings. The conduit fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly. Where more than one conduit is placed in a single trench, or in duct banks, joints in the conduit shall be staggered a minimum of 2 feet.

Changes in direction of runs exceeding 10 degrees, either vertical or horizontal, shall be accomplished using manufactured sweep bends.

Whether or not specifically indicated on the drawings, where the soil encountered at established duct bank grade is an unsuitable material, as determined by the RPR, the unsuitable material shall be removed per Item P-152 and replaced with suitable material. Additional duct bank supports shall be installed, as approved by the RPR.

All excavation shall be unclassified and shall be considered incidental to Item L-110. Dewatering necessary for duct installation, and erosion per federal, state, and local requirements is incidental to Item L-110.

Unless otherwise specified, excavated materials that are deemed by the RPR to be unsuitable for use in backfill or embankments shall be removed and disposed of offsite.

Any excess excavation shall be filled with suitable material approved by the RPR and compacted per Item P-152.

It is the Contractor’s responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables) cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

a. Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred

b. Trenching, etc., in cable areas shall then proceed with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair.

**110-3.2 Duct banks.** Unless otherwise shown in the plans, duct banks shall be installed so that the top of the concrete envelope is not less than 18 inches below the bottom of the base or stabilized base course layers where installed under runways, taxiways, aprons, or other paved areas, and not less than 18 inches below finished grade where installed in unpaved areas.
Unless otherwise shown on the plans, duct banks under paved areas shall extend at least 3 feet beyond the edges of the pavement or 3 feet beyond any under drains that may be installed alongside the paved area. Trenches for duct banks shall be opened the complete length before concrete is placed so that if any obstructions are encountered, provisions can be made to avoid them. Unless otherwise shown on the plans, all duct banks shall be placed on a layer of concrete not less than 3 inches thick prior to its initial set. The Contractor shall space the conduits not less than 3 inches apart (measured from outside wall to outside wall). All such multiple conduits shall be placed using conduit spacers applicable to the type of conduit. As the conduit laying progresses, concrete shall be placed around and on top of the conduits not less than 3 inches thick unless otherwise shown on the plans. All conduits shall terminate with female ends for ease of access in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Conduits forming the duct bank shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches to anchor the assembly into the earth prior to placing the concrete encasement. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

When specified, the Contractor shall reinforce the bottom side and top of encasements with steel reinforcing mesh or fabric or other approved metal reinforcement. When directed, the Contractor shall supply additional supports where the ground is soft and boggy, where ducts cross under roadways, or where shown on the plans. Under such conditions, the complete duct structure shall be supported on reinforced concrete footings, piers, or piles located at approximately 5-foot intervals. All pavement surfaces that are to have ducts installed therein shall be neatly saw cut to form a vertical face. All excavation shall be included in the contract with price for the duct.

Install a plastic, detectable, color as noted, 3 to 6 inches wide tape, 8 inches minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inchwide tape only for single conduit runs. Utilize the 6-inch wide tape for multiple conduits and duct banks. For duct banks equal to or greater than 24 inches in width, utilize more than one tape for sufficient coverage and identification of the duct bank as required.

When existing cables are to be placed in split duct, encased in concrete, the cable shall be carefully located and exposed by hand tools. Prior to being placed in duct, the RPR shall be notified so that he may inspect the cable and determine that it is in good condition. Where required, split duct shall be installed as shown on the drawings or as required by the RPR.

**110-3.3 Conduits without concrete encasement.** Trenches for single-conduit lines shall be not less than 6 inches nor more than 12 inches wide. The trench for 2 or more conduits installed at the same level shall be proportionately wider. Trench bottoms for conduits without concrete encasement shall be made to conform accurately to grade so as to provide uniform support for the conduit along its entire length.

Unless otherwise shown on the plans, a layer of fine earth material, at least 4 inches thick (loose measurement) shall be placed in the bottom of the trench as bedding for the conduit. The bedding material shall consist of soft dirt, sand or other fine fill, and it shall contain no particles that would be retained on a 1/4-inch sieve. The bedding material shall be tamped until firm. Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport’s secured area where trespassing is prohibited are at least 18 inches below the finished grade. Conduits outside the Airport’s secured area shall be installed so that the tops of the conduits are at least 24 inches below the finished grade per National Electric Code (NEC), Table 300.5.
When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

**110-3.4 Markers.** The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet square and 4 - 6 inches thick extending approximately one inch above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet along the cable or duct run, with an additional marker at each change of direction of cable or duct run.

The Contractor shall impress the word “DUCT” or “CONDUIT” on each marker slab. Impression of letters shall be done in a manner, approved by the RPR, for a neat, professional appearance. All letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the RPR. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the RPR. The letters shall be 4 inches high and 3 inches wide with width of stroke 1/2 inch and 1/4 inch deep or as large as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

**110-3.5 Backfilling for conduits.** For conduits, 8 inches of sand, soft earth, or other fine fill (loose measurement) shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted per Item P-152 except that material used for back fill shall be select material not larger than 4 inches in diameter.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

**110-3.6 Backfilling for duct banks.** After the concrete has cured, the remaining trench shall be backfilled and compacted per Item P-152 “Excavation and Embankment” except that the material used for backfill shall be select material not larger than 4 inches in diameter. In addition to the requirements of Item P-152, where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet of duct bank or one work period’s construction, whichever is less.
Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.7 Restoration. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The restoration shall include sodding or seeding shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. All restoration shall be considered incidental to the respective L-110 pay item. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

110-3.8 Ownership of removed cable. Cable to be removed shall be legally disposed of off airport property.

METHOD OF MEASUREMENT

110-4.1 Underground conduits and duct banks shall be measured by the linear feet of conduits and duct banks installed, including encasement, locator tape, trenching and backfill with designated material, and restoration, and for drain lines, the termination at the drainage structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.

BASIS OF PAYMENT

110-5.1 Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, and, for drain lines, the termination at the drainage structure. This price shall be full compensation for removal and disposal of existing duct banks and conduits as shown on the plans, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications.

Payment will be made under:

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<thead>
<tr>
<th>Item L-110-5.1</th>
<th>Clear Existing Conduit, Remove Existing Cables – per linear foot</th>
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<td>Concrete Encased, 3-Way, 3-Inch PVC Conduit, Schedule 40 – per linear foot</td>
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<tr>
<td>Item L-110-5.5</td>
<td>Concrete Encased, 4-Way, 4-Inch PVC Conduit, Schedule 80 – per linear foot</td>
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<td>Item L-110-5.6</td>
<td>Concrete Encased, 2-Way, 4-Inch PVC Conduit, Schedule 40 – per linear foot</td>
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<td>Item L-110-5.7</td>
<td>Concrete Encase existing 4-Way, 5-Inch PVC Conduit– per linear foot</td>
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</table>
Item L-110-5.8  Concrete Encase existing 1-Way, 3-Inch PVC Conduit– per linear foot
Item L-110-5.9  Removal of Miscellaneous Duct Banks– per linear foot

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circular (AC)

AC 150/5340-30  Design and Installation Details for Airport Visual Aids
AC 150/5345-53  Airport Lighting Equipment Certification Program

ASTM International (ASTM)

ASTM A615  Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

National Fire Protection Association (NFPA)

NFPA-70  National Electrical Code (NEC)

Underwriters Laboratories (UL)

UL Standard 6  Electrical Rigid Metal Conduit - Steel
UL Standard 514B  Conduit, Tubing, and Cable Fittings
UL Standard 514C  Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 1242  Electrical Intermediate Metal Conduit Steel
UL Standard 651  Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
UL Standard 651A  Type EB and A Rigid PVC Conduit and HDPE Conduit

END OF ITEM L-110
ITEM L-115 ELECTRICAL MANHOLES AND JUNCTION STRUCTURES

DESCRIPTION

115-1.1 This item shall consist of electrical manholes and junction structures (hand holes, pull boxes, junction cans, etc.) installed per this specification, at the indicated locations and conforming to the lines, grades and dimensions shown on the plans or as required by the RPR. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the RPR including removal of existing manholes and junction structures as shown on the plans.

EQUIPMENT AND MATERIALS

115-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer’s certification of compliance with the applicable specification when so requested by the RPR.

b. Manufacturer’s certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor’s cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner.

115-2.2 Concrete structures. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. Cast-in-place concrete structures shall be as shown on the plans.

115-2.3 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program. Provide precast concrete structures where shown on the plans.
Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand 100,000 lb aircraft loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans.

Threaded inserts and pulling eyes shall be cast in as shown on the plans.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the RPR shall be submitted by the Contractor to allow for a full evaluation by the RPR. The RPR shall review per the process defined in the General Provisions.

115-2.4 Junction boxes. Junction boxes shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) airport light bases that are encased in concrete. The light bases shall have a L-894 blank cover, gasket, and stainless steel hardware. All bolts, studs, nuts, lock washers, and other similar fasteners used for the light fixture assemblies must be fabricated from 316L (equivalent to EN 1.4404), 18-8, 410, or 416 stainless steel. If 18-8, 410, or 416 stainless steel is utilized it shall be passivated and be free from any discoloration. Covers shall be 3/8-inch (9-mm) thickness for L-867 and 3/4-inch (19-mm) thickness for L-868. All junction boxes shall be provided with both internal and external ground lugs.

115-2.5 Mortar. The mortar shall be composed of one part of cement and two parts of mortar sand, by volume. The cement shall be per the requirements in ASTM C150, Type I. The sand shall be per the requirements in ASTM C144. Hydrated lime may be added to the mixture of sand and cement in an amount not to exceed 15% of the weight of cement used. The hydrated lime shall meet the requirements of ASTM C206. Water shall be potable, reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

115-2.6 Concrete. All concrete used in structures shall conform to the requirements of Item P-610, Concrete for Miscellaneous Structures.

115-2.7 Frames and covers. The frames shall conform to one of the following requirements:
   a. ASTM A48   Gray iron castings
   b. ASTM A47   Malleable iron castings
   c. ASTM A27   Steel castings
   d. ASTM A283, Grade D   Structural steel for grates and frames
   e. ASTM A536   Ductile iron castings
   f. ASTM A897   Austempered ductile iron castings

All castings specified shall withstand a maximum tire pressure of 200 psi and maximum load of 100,000 lbs.

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word “ELECTRIC” or other approved designation cast on it. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a “DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER” safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

115-2.8 Ladders. Ladders, if specified, shall be galvanized steel or as shown on the plans.
115-2.9 Reinforcing steel. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A615, Grade 60.

115-2.10 Bedding/special backfill. Bedding or special backfill shall be as shown on the plans.

115-2.11 Flowable backfill. Flowable material used to backfill shall conform to the requirements of Item P-153, Controlled Low Strength Material.

115-2.12 Cable trays. Cable trays shall be of plastic. Cable trays shall be located as shown on the plans.


115-2.14 Conduit terminators. Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

115-2.15 Pulling-in irons. Pulling-in irons shall be manufactured with 7/8-inch (22 mm) diameter hot-dipped galvanized steel or stress-relieved carbon steel roping designed for concrete applications (7 strand, 1/2-inch (12 mm) diameter with an ultimate strength of 270,000 psi (1862 MPa)). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

115-2.16 Ground rods. Ground rods shall be one piece, copper clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case shall they be less than 8 feet (2.4 m) long nor less than 5/8 inch (16 mm) in diameter.

CONSTRUCTION METHODS

115-3.1 Unclassified excavation. It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the RPR without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings to the lines and grades or elevations shown on the plans or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to Item L-115. Dewatering necessary for structure installation and erosion per federal, state, and local requirements is incidental to Item L-115.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the RPR. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the RPR. Structures shall be placed after the RPR has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 inches (150 mm) of sand or a material approved by the RPR as a suitable base to receive the structure. The base material shall be compacted...
and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the plans.

115-3.2 Concrete structures. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

115-3.3 Precast unit installations. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 Placement and treatment of castings, frames and fittings. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the RPR and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written approval is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the RPR and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor’s expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 Installation of ladders. Ladders shall be installed such that they may be removed if necessary. Mounting brackets shall be supplied top and bottom and shall be cast in place during fabrication of the structure or drilled and grouted in place after erection of the structure.

115-3.6 Removal of sheeting and bracing. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The RPR may direct the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 Backfilling. After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches (150 mm) in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

Backfill shall not be placed against any structure until approval is given by the RPR. In the case of concrete, such approval shall not be given until tests made by the laboratory under supervision of the RPR establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

Where required, the RPR may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all
damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 Connection of duct banks. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

115-3.9 Grounding. A ground rod shall be installed in the floor of all concrete structures so that the top of rod extends 6 inches (150 mm) above the floor. The ground rod shall be installed within one foot (30 cm) of a corner of the concrete structure. Ground rods shall be installed prior to casting the bottom slab. Where the soil condition does not permit driving the ground rod into the earth without damage to the ground rod, the Contractor shall drill a 4-inch (100 mm) diameter hole into the earth to receive the ground rod. The hole around the ground rod shall be filled throughout its length, below slab, with Portland cement grout. Ground rods shall be installed in precast bottom slab of structures by drilling a hole through bottom slab and installing the ground rod. Bottom slab penetration shall be sealed watertight with Portland cement grout around the ground rod.

A grounding bus of 4/0 bare stranded copper shall be exothermically bonded to the ground rod and loop the concrete structure walls. The ground bus shall be a minimum of one foot (30 cm) above the floor of the structure and separate from other cables. No. 2 American wire gauge (AWG) bare copper pigtails shall bond the grounding bus to all cable trays and other metal hardware within the concrete structure. Connections to the grounding bus shall be exothermic. If an exothermic weld is not possible, connections to the grounding bus shall be made by using connectors approved for direct burial in soil or concrete per UL 467. Hardware connections may be mechanical, using a lug designed for that purpose.

115-3.10 Cleanup and repair. After erection of all galvanized items, damaged areas shall be repaired by applying a liquid cold-galvanizing compound per MIL-P-21035. Surfaces shall be prepared and compound applied per the manufacturer's recommendations.

Prior to acceptance, the entire structure shall be cleaned of all dirt and debris.

115-3.11 Restoration. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. All sodding, grading and restoration shall be considered incidental to the respective Item L-115 pay item.

The Contractor shall grade around structures as required to provide positive drainage away from the structure.

Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials.

Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.12 Inspection. Prior to final approval, the electrical structures shall be thoroughly inspected for conformance with the plans and this specification. Any indication of defects in materials or workmanship shall be further investigated and corrected. The earth resistance to ground of each ground rod shall not exceed 25 ohms. Each ground rod shall be tested using the fall-of-potential ground impedance test per American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81. This test shall be performed prior to establishing connections to other ground electrodes.

115-3.13 Manhole elevation adjustments. The Contractor shall adjust the tops of existing manholes in areas designated in the Contract Documents to the new elevations shown. The Contractor shall be responsible for determining the exact height adjustment required to raise or lower the top of each
manhole to the new elevations. The existing top elevation of each manhole to be adjusted shall be determined in the field and subtracted/added from the proposed top elevation.

The Contractor shall remove/extend the existing top section or ring and cover on the manhole structure or manhole access. The Contractor shall install precast concrete sections or grade rings of the required dimensions to adjust the manhole top to the new proposed elevation or shall cut the existing manhole walls to shorten the existing structure, as required by final grades. The Contractor shall reinstall the manhole top section or ring and cover on top and check the new top elevation.

The Contractor shall construct a concrete slab around the top of adjusted structures located in graded areas that are not to be paved. The concrete slab shall conform to the dimensions shown on the plans.

115-3.14 Duct extension to existing ducts. Where existing concrete encased ducts are to be extended, the duct extension shall be concrete encased plastic conduit. The fittings to connect the ducts together shall be standard manufactured connectors designed and approved for the purpose. The duct extensions shall be installed according to the concrete encased duct detail and as shown on the plans.

METHOD OF MEASUREMENT

115-4.1 Electrical manholes and junction structures shall be measured by each unit completed in place and accepted. The following items shall be included in the price of each unit: All required excavation and dewatering; sheeting and bracing; all required backfilling with on-site materials; restoration of all surfaces and finished grading and turfing; all required connections; temporary cables and connections; and ground rod testing

BASIS OF PAYMENT

115-5.1 The accepted quantity of electrical manholes and junction structures will be paid for at the Contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

- Item L-115-5.1 Electrical Handhole, 4’X4’X4’, Aircraft Rated - Per Each
- Item L-115-5.2 L-867B Base Can in New Asphalt Pavement – per each
- Item L-115-5.3 L-867B Base Can in Existing Pavement – per each
- Item L-115-5.4 New 3/8” Cover Plate and Bolts for Existing L-867B Base Can – per each
- Item L-115-5.5 Spacer Ring Adjustment for Existing L-867B Base Can – per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSII/IEEE STD 81 IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System

Advisory Circular (AC)

AC 150/5345-7 Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26  Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-42  Specification for Airport Light Bases, Transformer housings, Junction Boxes, and Accessories
AC 150/5340-30  Design and Installation Details for Airport Visual Aids
AC 150/5345-53  Airport Lighting Equipment Certification Program

Commercial Item Description (CID)
A-A 59544  Cable and Wire, Electrical (Power, Fixed Installation)

ASTM International (ASTM)
ASTM A27  Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47  Standard Specification for Ferritic Malleable Iron Castings
ASTM A48  Standard Specification for Gray Iron Castings
ASTM A283  Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536  Standard Specification for Ductile Iron Castings
ASTM A615  Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A897  Standard Specification for Austempered Ductile Iron Castings
ASTM C144  Standard Specification for Aggregate for Masonry Mortar
ASTM C150  Standard Specification for Portland Cement
ASTM C206  Standard Specification for Finishing Hydrated Lime

FAA Engineering Brief (EB)
EB #83  In Pavement Light Fixture Bolts

Mil Spec
MIL-P-21035  Paint High Zinc Dust Content, Galvanizing Repair

National Fire Protection Association (NFPA)
NFPA-70  National Electrical Code (NEC)

END OF ITEM L-115
ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS

DESCRIPTION

125-1.1 This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

125-2 General.

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not performs as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for to operate properly.

b. Manufacturer’s certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

c. All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submittions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor’s submittals shall be submitted in electronic PDF format, tabbed by specification section. The RPR reserves the right to reject any or all equipment, materials or procedures, which, in the RPR’s opinion, does not meet the system design and the standards and codes, specified herein.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner’s discretion, with no additional cost to the Owner.

All LED light fixtures, with the exception of obstruction lighting (AC 150/5345-43) must be warranted by the manufacturer for a minimum of 4 years after date of installation inclusive of all electronics. Obstruction lighting warranty is set by the individual manufacturer.
EQUIPMENT AND MATERIALS

125-2.2 Conduit/Duct. Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.

125-2.3 Cable and Counterpoise. Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.

125-2.4 Tape. Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.

125-2.5 Cable Connections. Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.

125-2.6 Retroreflective Markers. Retroreflective markers shall be type L-853 and shall conform to the requirements of AC 150/5345-39.

125-2.7 Runway and Taxiway Lights. Runway and taxiway lights shall conform to the requirements of AC 150/5345-46. Lamps shall be of size and type indicated, or as required by fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors conforming to the specification for the light concerned or to the standard referenced.

### LIGHTS

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125-2.8 Runway and Taxiway Signs. Runway and Taxiway Guidance Signs should conform to the requirements of AC 150/5345-44.
## Signs

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### 125-2.9 Runway End Identifier Light (REIL)
Not required.

### 125-2.10 Precision Approach Path Indicator (PAPI)
Not required.

### 125-2.11 Circuit Selector Cabinet
Not used.

### 125-2.12 Light Base and Transformer Housings
Light Base and Transformer Housings should conform to the requirements of AC 150/5345-42. Light bases shall be Type L-867 and L-868, Class 1A, Size B shall be provided as indicated or as required to accommodate the fixture or device installed thereon. Base plates, cover plates, and adapter plates shall be provided to accommodate various sizes of fixtures.

### 125-2.13 Isolation Transformers
Isolation Transformers shall be Type L-830, size as required for each installation. Transformer shall conform to AC 150/5345-47.

## INSTALLATION

### 125-3.1 Installation
The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

### 125-3.2 Testing
All lights shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. The test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The fixtures shall illuminate properly during each portion of the test.

### 125-3.3 Shipping and Storage
Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer’s recommendations.

### 125-3.4 Elevated and In-pavement Lights
Water, debris, and other foreign substances shall be removed prior to installing fixture base and light.

A jig or holding device shall be used when installing each light fixture to ensure positioning to the proper elevation, alignment, level control, and azimuth control. Light fixtures shall be oriented with the light
beams parallel to the runway or taxiway centerline and facing in the required direction. The outermost edge of fixture shall be level with the surrounding pavement. Surplus sealant or flexible embedding material shall be removed. The holding device shall remain in place until sealant has reached its initial set.

**METHOD OF MEASUREMENT**

125-4.1 Reflective markers will be measured by the number installed as completed units in place, ready for operation, and accepted by the RPR. Runway and taxiway lights will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR. Guidance signs will be measured by the number of each type and size installed as completed units, in place, ready for operation, and accepted by the RPR.

**BASIS OF PAYMENT**

125-5.1 Payment will be made at the Contract unit price for each complete runway or taxiway light, guidance sign or reflective marker installed by the Contractor and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

- **Item L-125-5.1** L-861T(L) Elevated Taxiway Edge Light on New L-867B Light Base in New Pavement – per each
- **Item L-125-5.2** L-861T(L) Elevated Taxiway Edge Light on New 12” L-867B Light Base in New Pavement – per each
- **Item L-125-5.3** L-861T Elevated Taxiway Edge Light on New L-867B Light Base in New Pavement – per each
- **Item L-125-5.4** L-861T Elevated Taxiway Edge Light on Existing L-867B Light Base with Risers– per each
- **Item L-125-5.5** L-862 Elevated Runway Edge Light on Adapter for Existing L-868B Light Base – per each
- **Item L-125-5.6** L-850C In-Pavement Runway Edge Light on New L-868B Light Base – per each
- **Item L-125-5.7** L-853 Elevated Taxiway Edge Retroreflective Marker – per each
- **Item L-125-5.8a** L-858(L) Guidance Sign, Size 1, 1 Module, on New Foundation – per each
- **Item L-125-5.8b** L-858(L) Guidance Sign, Size 1, 2 Module, on New Foundation – per each
- **Item L-125-5.8c** L-858(L) Guidance Sign, Size 1, 3 Module, on New Foundation – per each
- **Item L-125-5.8d** L-858(L) Guidance Sign, Size 1, 4 Module, on New Foundation – per each
- **Item L-125-5.8e** Relocate 2 Module Guidance Sign on New Foundation – per each
- **Item L-125-5.9** L-867 Base Can and Isolated Transformer for L-804 Elevated Runway Guard Light – per each
- **Item L-125-5.10** L-804 Elevated Runway Guard Light Fixture (ADB Safegate L804RGL Code 44A474-4111) – per each
REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

<table>
<thead>
<tr>
<th>AC 150/5340-18</th>
<th>Standards for Airport Sign Systems</th>
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<tbody>
<tr>
<td>AC 150/5340-26</td>
<td>Maintenance of Airport Visual Aid Facilities</td>
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<td>AC 150/5340-30</td>
<td>Design and Installation Details for Airport Visual Aids</td>
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<td>AC 150/5345-5</td>
<td>Circuit Selector Switch</td>
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<td>AC 150/5345-7</td>
<td>Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits</td>
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<td>Specification for L-823 Plug and Receptacle, Cable Connectors</td>
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<td>AC 150/5345-28</td>
<td>Precision Approach Path Indicator (PAPI) Systems</td>
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<tr>
<td>AC 150/5345-39</td>
<td>Specification for L-853, Runway and Taxiway Retroreflective Markers</td>
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<tr>
<td>AC 150/5345-42</td>
<td>Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories</td>
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<td>AC 150/5345-44</td>
<td>Specification for Runway and Taxiway Signs</td>
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<td>AC 150/5345-46</td>
<td>Specification for Runway and Taxiway Light Fixtures</td>
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<tr>
<td>AC 150/5345-47</td>
<td>Specification for Series to Series Isolation Transformers for Airport Lighting Systems</td>
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<tr>
<td>AC 150/5345-51</td>
<td>Specification for Discharge-Type Flashing Light Equipment</td>
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<tr>
<td>AC 150/5345-53</td>
<td>Airport Lighting Equipment Certification Program</td>
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</table>

Engineering Brief (EB)

| EB No. 67 | Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures |

END OF ITEM L-125
## SUMMARY OF APPROXIMATE QUANTITIES

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<tr>
<th>Item</th>
<th>Description</th>
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### Note

All listed quantities are considered approximate. Actual quantities will be determined by the contractor upon work in place.

The actual sizes of equipment will be determined by the contractor.

The project plans and specifications are subject to change as work progresses. Any such changes will be incorporated into the contract documents.

All plans and specifications are subject to change without notice.

The contractor shall be responsible for the accuracy of all work performed.

In the event of conflict between these plans and specifications, the contractor shall have the final authority to resolve the issue.

### SCHEDULE I

1. **(FEDERAL):**
   - REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

2. **(NON-FEDERAL):**
   - UPS K-LOADER PADS

### SCHEDULE II

- GPR
- JAC

### ADDENDUM 3

- **DATE:** MARCH 19, 2020
- **RS&H PROJECT NUMBER:** 225-0005-022
- **SHEET TITLE:** SCHEDULE I (FEDERAL)
- **DRAWING NUMBER:** 3
- **ADDENDUM:** 03

### Packet Pg. 742

Attachment: FB-20-207 Addendum 3 (E) (RES-153-20; FB-20-207, Realignment of Boise Airport)
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I
(FEDERAL):

SCHEDULE II
(NON-FEDERAL):

UPS K-LOADER PADS

ADDENDUM 3

3/19/2020

Attachment: FB 20-207 Addendum 3 (E) (RES-153-20 : FB 20-207; Realignment of...
REVISIONS

NO.
DESCRIPTION
DATE

DATE ISSUED:
REVIEWED BY:
DRAWN BY:
DESIGNED BY:

MARCH 19, 2020

RS&H PROJECT NUMBER
SHEET TITLE
DRAWING NUMBER

ADDENDUM 3
SHEET 52 OF 80

REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I
(FEDERAL):

4.B.1.g
Packet Pg. 745

Attachment: FB 20-207 Addendum 3 (E) (RES-153-20 : FB 20-207; Realignment of...
REVISIONS

NO.

DESCRIPTION

DATE

REVIEWED BY

DRAWN BY

DESIGNED BY

MARCH 19, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ADDENDUM 3

SHEET OF 80

225-0005-022

SCHEDULE I (FEDERAL):

REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):

UPS K-LOADER PADS

PAB

CAT PAB

3/19/2020

ADDENDUM 03

4.B.1.g

Packet Pg. 746

Attachment: FB 20-207 Addendum 3 (E) (RES-153-20 : FB 20-207; Realignment of...
Addendum 3

SCHEDULE I (FEDERAL):
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):
UPS K-LOADER PADS

ADDENDUM 03
3/19/2020
ADDENDUM 3
SHEET 3 OF 8

SCHEDULE I (FEDERAL):
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II (NON-FEDERAL):
UPS K-LOADER PADS

Packet Pg. 753
Attachment: FB 20-207 Addendum 3 (E) (RES-153-20 : FB 20-207; Realignment of...
REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE I
(FEDERAL):

- UPS K-LOADER PADS

SCHEDULE II
(NON-FEDERAL):

- PAB CAT PAB 71

ADDENDUM 3
SHEET OF 80

DRAWING NUMBER
225-0005-022

RS&H PROJECT NUMBER

SHEET TITLE

4.B.1.g

Attachment: FB 20-207 Addendum 3 (E) (RES-153-20 : FB 20-207 : Realignment of...
HANDHOLE SCHEDULE

REVISIONS

NO.

DESCRIPTION

DATE

DATE ISSUED:

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

MARCH 19, 2020

RS&H PROJECT NUMBER

SHEET TITLE

DRAWING NUMBER

ADDENDUM 3

SHEET OF

80

225-0005-022

SCHEDULE I

(FEDERAL):

REALIGNMENT OF TAXIWAY H AND MILL/OVERLAY PORTIONS OF TAXIWAYS J & B

SCHEDULE II

(NON-FEDERAL):

UPS K-LOADER PADS

3/19/2020

3

4.B.1.g

Packet Pg. 758
### TAXIWAY EDGE LIGHT SCHEDULE

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### TAXIWAY EDGE LIGHT SCHEDULE - FUTURE USE

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### ELEVATED RGL'S SCHEDULE

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TO: Mayor and Council
FROM: Jerry Pugh, Parks & Recreation
NUMBER: RES-154-20
DATE: April 9, 2020
SUBJECT: 2020 Murgoitio Lease Agreement

BACKGROUND:
The Boise Airport purchased two parcels of property from the Murgoitio family, and ownership was transferred to Boise Parks and Recreation. The current lessees have been leasing the property since 2004.

The first parcel is located at 9920 Lake Hazel Road, and the second parcel is located at 4001 S Cole Road.

The Lease Agreement will terminate on December 31, 2020.

FINANCIAL IMPACT:
The Lessees will pay the City an annual sum of $66.00 for the Lake Hazel Road property, and an annual sum of $160.00 for the Cole Road property.

ATTACHMENTS:
- 2020 Murgoitio Lease Agreement (PDF)
CITY OF BOISE

Resolution NO. RES-154-20

BY THE COUNCIL

BAGEANT, CLEGG, HALLYBURTON, SANCHEZ, THOMSON AND WOODINGS

A RESOLUTION APPROVING, AS TO BOTH FORM AND CONTENT, A LEASE AGREEMENT BY AND BETWEEN THE CITY OF BOISE CITY (DEPARTMENT OF PARKS AND RECREATION) AND LOU AND VICKI MURGOITIO, BY WHICH THE MURGOITIOS ENTER A LEASE AGREEMENT WITH BOISE CITY; AUTHORIZING THE MAYOR AND CITY CLERK, RESPECTIVELY, TO EXECUTE AND ATTEST THE AGREEMENT ON BEHALF OF BOISE CITY; AND ESTABLISHING AN EFFECTIVE DATE.

BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF BOISE CITY, IDAHO:

Section 1. That the Lease Agreement by and between the city of Boise City and Lou and Vicki Murgoitio, a copy of which is attached hereto and incorporated herein by reference, be, and is, approved as to both form and content.

Section 2. That the Mayor and City Clerk, respectively, be, and are, authorized to execute and attest the Lease Agreement for and on behalf of the city of Boise City.

Section 3. That this Resolution shall be in full force and effect immediately upon its adoption and approval.
LEASE AGREEMENT
City of Boise Parks and Recreation

THIS LEASE AGREEMENT, made and entered into this _____ day of ________________, 2020 and between the city of Boise City, an Idaho municipal corporation, by and through its Department of Parks and Recreation, hereinafter the "City," and Lou and Vicki Murgoitio, 7373 Maple Grove, Boise, Idaho, hereinafter "Lessees." The City and Lessees may each be referred to separately as a "Party" and collectively as the "Parties."

I. LEASE

City, for and in consideration of the terms of this Agreement with respect to the two (2) parcels of real property located in Ada County, Idaho (hereinafter the "Leased Premises") as more fully described below:

A. The first parcel is approximately sixty-three (63) acres of real property located at 9920 Lake Hazel Road, Boise, Idaho and more particularly described in Exhibit A, attached hereto and incorporated herein by reference, together with the appurtenances thereto.

B. The second parcel is approximately one hundred and sixty (160) acres of real property located at 4001 South Cole Road, Boise, Idaho and more particularly described in Exhibit B, attached hereto and incorporated herein by reference, together with the appurtenances thereto.

II. TERM OF LEASE AGREEMENT

This Lease Agreement shall commence at 12:01 a.m. on January 1, 2020 (the "Effective Date") and shall terminate at 11:59 p.m. on December 31, 2020, unless sooner terminated as herein provided.

III. RENTAL

Lessees shall pay to City an annual sum of Sixty-Six Dollars ($66.00) for the Lake Hazel Road property, and an additional annual sum of One Hundred Sixty Dollars ($160.00) for the Cole Road property, both shall be paid in full by March 15, 2020. In the event real property taxes are assessed on the Premises, they shall be paid in full by Lessees.

IV. USE OF PREMISES; LESSEE'S OBLIGATIONS

A. Lessee's use and occupancy of the Leased Premises shall be limited to agricultural activities. Lessees shall not use or permit the use of the Leased
Premises for any other purpose including, but not limited to, the dumping of grass or storage of equipment or other materials. Lessees do not utilize for their agricultural operations upon the Leased Premises, without the express written consent of the City. Lessees further agree they will not commit, permit, nor suffer any damages to or waste upon the Licensed Premises or any of the improvements or appurtenances located or placed thereon by the City, or on the City's behalf. Lessees shall not permit nor suffer any lien, judgment, or encumbrance to be entered against or filed upon the Licensed Premises or any improvements or fixtures thereon, and they hereby covenant to satisfy any such lien, judgment, or encumbrance at their sole and separate expense, and in all respects fully to indemnify, save, defend, and hold harmless the City against all damages, costs, and charges, including reasonable attorney's fees, in any claim or suit involving any liens, claims, judgments, or encumbrances caused or suffered by Lessees with respect to the Leased Premises or any part thereof.

B. Lessees shall be responsible for and pay for all irrigation water used on the Leased Premises. The City shall bill Lessees on an annual basis for the cost of irrigation water from the Boise-Kuna Irrigation District, the New York Irrigation District, or other available irrigation source. The billing shall include an invoice to Lessees with copies of the original assessments or invoices paid by the City. Lessees shall pay the amounts invoiced within thirty (30) days of the date of the billing. Lessees shall make payment to:

Boise City Parks & Recreation Department
Attn: Jerry Pugh, Community Volunteer Coordinator
1104 Royal Boulevard
Boise, Idaho 83706.

C. Lessees are solely responsible for supplying and maintaining all equipment necessary for conducting Lessees' agricultural operations under this Lease Agreement.

D. Lessees shall be solely responsible for all expenses incurred in the course of Lessees' use of the Premises.

E. Lessees shall be solely responsible for all weed control upon the Leased Premises, including cultivated land, along fence lines, as well as unused portions of the Lease Premises. Upon request by the City, the Lessees shall take all commercially reasonable and lawful measures to control weeds which are the subject of the City's request.

F. Lessees agree to clean, maintain, and keep in good repair all ditches, laterals, and drains situated upon the Premises and shall make full use of the water rights appurtenant to the Lease Premises.
G. Lessees shall keep and maintain in good repair all fences and gates located upon the Lease Premises.

V. USE OF CHEMICALS

Lessees shall use and apply only those chemicals and fertilizers approved by the Environmental Protection Agency for farm related operations. In addition, Lessees shall have all chemicals applied by a state of Idaho licensed chemical applicator. Lessees shall pay all costs of property cleanup, damage, and chemical removal due to the application of unapproved chemicals or due to the application of chemicals by an unlicensed chemical applicator.

VI. INDEMNIFICATION

A. Lessees shall be solely responsible for any personal property placed or used by them upon the Licensed Premises. The Parties understand and agree that Lessor makes no warranty or promise as to the condition, safety, usefulness, or habitability of the Premises, and Lessees accept the Premises as is.

B. Lessees shall indemnify, save, defend, and hold the City harmless from any loss, liability, claim, or action for damages or injury to Lessees, or damages to personal property, or his employees, agents, guests, or business invitees arising out of, or resulting from, any condition existing on the Leased Premises or from any lack of maintenance or repair thereon.

C. Lessees shall not be considered agents of the City in any manner, or for any purpose whatsoever, in their use and occupancy of the Leased Premises, and Lessees hereby agree to indemnify, save, defend, and hold the City harmless from any loss, liability, claim, or action from damages or injuries to persons or property in any way arising out of or resulting from the use and occupancy of the Leased Premises by Lessees, their agents, employees, guest, or business invitees.

D. If any claim, suit or action is filed against the City for any loss or claim described in this paragraph, Lessees, at City's option, shall defend the City and assume all costs, including attorneys' fees, associated with the defense or resolution thereof, or indemnify City for all such costs and fees incurred by City in the defense or resolution thereof.

VII. INSURANCE

A. Lessees shall maintain, throughout the term of the Lease Agreement,
the following types of insurance in the amounts set forth below, as specified in the Idaho Tort Claims Act set forth in Title 6, Chapter 9 of the Idaho Code:

1. General Liability Insurance with respect to its activities and operations upon the Leased Premises, with a limit of no less than $1,000,000.00 per occurrence;

2. Statutory Workers Compensation Insurance, regardless of the number of employees (including himself), or lack thereof, to be engaged in work on the Leased Premises, in the statutory limits as required by law. In case any work to be done on the Leased Premises is contracted to another party not subject to this Lease Agreement, the Lessees shall require the contractor to provide Workers Compensation Insurance for itself and its employees.

3. Automobile insurance with a limit of no less than $500,000.00 per occurrence for owned, non-owned, and hired vehicles.

B. City shall be a named insured in all insurance policies required under this Lease Agreement.

C. The limits of insurance shall not be deemed a limitation of the covenants to indemnify, save, hold harmless, and defend City. If City becomes liable for an amount in excess of the insurance limits, Lessee covenants and agrees to indemnify, save, hold harmless, and defend City from, for, and against any and all such losses, claims, and actions or judgments for damages or liability to persons or property.

D. Within five (5) days of the Effective Date, Lessees shall provide City with a certificate of insurance or other proof of insurance evidencing Lessees' compliance with the insurance types and amounts required herein, and shall file such proof of insurance with:

Boise Parks & Recreation Department
Attn: Jerry Pugh, Community Volunteer Coordinator
1104 Royal Blvd.
Boise, Idaho 83706

E. In the event the insurance minimums of the Idaho Tort Claims Act are changed, Lessees shall immediately submit proof of compliance with the changed limits.
VIII. TERMINATION

A. Lessee or the City may terminate this Lease Agreement at any time and for any reason upon ninety (90) days prior written notice. The Parties understand and agree that the Leased Premises may be the sites of future public parks. Lessees shall remove all personal property and otherwise vacate the Leased Premises upon the expiration or prior termination of this Agreement or any extension or renewal thereof.

B. The City shall compensate Lessee for crop losses if this Lease Agreement is terminated within the ninety-day (90) notice period. There shall be no compensation for crop losses for any crops planted after the receipt of the notice of termination.

C. In the event of a holdover by Lessees beyond the expiration or termination of this Lease Agreement or any extension or renewal thereof, the City, in addition to and without waiver of any other rights or remedies it may have, may immediately re-enter and take possession and expel Lessees from the Leased Premises, with or without process of law.

IX. DEFAULT AND CANCELLATION

A. If Lessees are in breach or default of any of the terms, covenants, or conditions of this Lease Agreement and fail or refuse to cure such breach or default within ten (10) days of written notice thereof, this Lease Agreement, and all rights of Lessees in and to the Leased Premises, at the City's option, may be deemed terminated and forfeited without further notice or demand.

B. In the event of any default or breach of this Lease Agreement and Lessees' failure or refusal to cure, as hereinbefore provided, the City may, upon three (3) days' notice, enter into and upon the Leased Premises, take possession thereof and expel Lessee therefrom, with or without process of law and without being guilty of trespass, and without prejudice to any and all other rights and remedies the City may have. In the event of re-entry by the City, Lessees shall be liable for any damages suffered by the City, its agents or employees, and any costs, including legal expenses and attorneys' fees incurred by the City in recovering the Leased Premises.

C. The City's waiver of any breach or default of any term, covenant or condition of this Lease Agreement, including but not limited to the City's acceptance, with our without demand, or any rental payments after the same have become delinquent, shall not be construed as a waiver of any subsequent breach or default of the same or a different term, covenant or condition, nor shall such waiver operate to prejudice, waive, or affect
any right or remedy the City may have under this Lease Agreement with respect to such subsequent default or breach by Lessees.

D. The City's acceptance of rent from Lessees after Lessees' default or breach or after the cancellation, termination, or expiration of this Lease Agreement, or any extension thereof, shall not operate to reinstate, renew or extend the term of this Lease Agreement or affect any notice to Lessees or operate as a waiver of the City's right to enforce the payment of rental then due or thereafter falling due.

E. Lessees shall be liable to the City for all damages and costs, including legal expenses and attorneys' fees, suffered or incurred by the City in the enforcement of any of the terms, covenants or conditions of this Lease Agreement.

X. CITY'S RESERVATION OF RIGHT TO SELL PREMISES

The City expressly reserves the right to sell, exchange, transfer, or otherwise convey all or part of the Leased Premises during the term of this Lease Agreement. If the City elects to sell, exchange, transfer, or otherwise convey all or part of the Leased Premises during the term of this Lease Agreement, and if the acquiring party does not agree to accept assignment of all rights and responsibilities as a lessor under this Lease Agreement, the City shall follow the termination procedure as provided in Paragraph VII of this Lease Agreement.

XI. SURRENDER OF PREMISES; QUIET ENJOYMENT

Upon the expiration or earlier termination or cancellation of this Lease Agreement, Lessees agree to quit and surrender the Premises to the City without causing or suffering any waste thereon. The City hereby agrees that in consideration of Lessees' performance of the terms and conditions of this Lease Agreement, Lessees may peaceably and quietly have and enjoy the Leased Premises for the duration of this Lease Agreement.

XII. ASSIGNMENT, SUBLEASE, OR TRANSFER

Lessees shall not assign, sublet, or transfer the Leased Premises, or any portion thereof, or cause or suffer any alterations thereto, other than as specified in this Lease Agreement, without the express written consent of the City.

XIII. NOTICES

All notices to be given in respect to this Lease Agreement shall be in writing and addressed as follows:
TO LESSEES:
Lou and Vicki Murgoitio
7373 S. Maple Grove Road
Boise, ID 83709

TO LESSOR:
Boise City Parks and Recreation
Attn: Director
1104 Royal Blvd.
Boise, ID 83706

With copies to:
Boise City Parks and Recreation
Attn: Community Volunteer Coord.
1104 Royal Blvd.
Boise, ID 83706

Boise City Attorney’s Office
Parks and Recreation Attorney
P.O. Box 500
Boise, ID 83701-0500

Notice shall be either hand-delivered or sent by registered or certified mail, postage prepaid, return receipt requested to the Party to be notified at the address specified above, or such other address as either Party may designate in writing. Every notice shall be deemed to have been given at the time it is deposited in the United States mail, or upon delivery to the party above specified, or their agent or legal representative.

XIV. ALTERATIONS

Lessees shall not make, or permit to be made, alterations on or to the Leased Premises without first obtaining the City’s written consent. Additions to, or alterations of, the Leased Premises shall become at once a part of the real property and belong to the City.

XV. LIENS

Lessees shall keep the Leased Premises free from any liens arising out of any work performed for, materials furnished to, or obligations incurred by Lessees.

XVI. INSPECTIONS OF PREMISES; CONDITIONS UPON TERMINATION

Lessees acknowledge that Lessees have inspected the Leased Premises and do hereby accept the Leased Premises as being in good and satisfactory order, condition, and repair. Lessees agree that upon termination of this Lease Agreement for any reason, including the expiration of its terms, Lessees shall surrender the Leased Premises to the City in the same condition as received, reasonable wear and tear, damage by fire or acts of nature excepted.
XVII. INSPECTION

Lessees shall permit the City and its contractors and employees, at any time, to enter the Leased Premises for the purposes of inspection for compliance with the terms of this Lease Agreement and for the exercise of the City's rights, the posting of notices, and for all other lawful purposes. The Parties shall supply each other with keys and any other instruments necessary to allow mutual entry onto the Leased Premises.

XVIII. GENERAL TERMS

A. **Binding Effect.** This Lease Agreement and the terms and conditions hereof, shall apply to and are binding upon the heirs, legal representatives, and successors of the Parties.

B. **Severability.** If any part of this Lease Agreement is held to be invalid or unenforceable, such holding will not affect the validity or enforceability of any other part of this Lease Agreement, so long as the remainder of the Lease Agreement is reasonably capable of completion.

C. **Entire Agreement.** This Lease Agreement contains the entire agreement of the Parties and supersedes any and all other agreements or understanding, oral or written, whether previous to the execution hereof or contemporaneous herewith.

D. **Interpretation.** Both Parties to this Lease Agreement had the opportunity to consult with legal counsel prior to execution. Therefore, this Lease Agreement and all terms and conditions contained herein shall be interpreted simply, according to their plain meaning, to ensure the mutual intent of the Parties is given effect. Accordingly, this Lease Agreement shall not be interpreted for or against either Party, regardless of the Party that caused it to be drafted.

E. **Applicable Law.** This Lease Agreement shall be governed by and construed and enforced in accordance with the laws of the state of Idaho, and the ordinances of the city of Boise.

F. **Approval by City Council.** This Lease Agreement shall not be effective for any purpose whatsoever until approved by resolution of the City Council and executed by the Mayor. By the granting of this lease, the City Council is not obligating itself, the city of Boise City, its officers or agents, with regard to any other discretionary action related to development of the Leased Premises as future public parks or other operation of the Leased Premises. Such discretionary action includes, but is not limited to, the granting of re-zonings, variances, use permits, environmental clearances.
or any other governmental agency approval that is required by law.

G. Authority. By signing this Lease Agreement as the representative of a Party, the person so signing certifies that he or she is the duly authorized representative of such Party and that he or she possesses actual authority to sign on its behalf.

[Signatures appear on following page.]
IN WITNESS WHEREOF, an authorized representative of each of the Parties hereto subscribed his or her name, on behalf of the Party represented, the day and year first written above:

FOR LESSOR:
The City of Boise City, Idaho:

By: ________________________________  
Lauren McLean, Mayor

Dated: ______________________________

FOR LESSEES:

Lou and Vicki Murgotio:

By: ________________________________  
Lou Murgotio, Notary

Dated: 2/7/2020

Vicki Murgotio, Notary

Dated: 2/7/2020

ATTEST:

Lynda Lowry, Ex-Officio City Clerk

State of Idaho  
) ss
County of Ada  

On this 7 day of February, 2020, before me, the undersigned Notary Public, personally appeared Lou Murgotio, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that s/he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first written above.

THOMAS BURNETT  
COMM. #20190949  
NOTARY PUBLIC  
STATE OF IDAHO

Notary Public for Idaho
Residing at: 1590 S Kimball Way, Boise, ID 83709
Commission Expires: 5-10-25

RECEIVED
APR 06 2020
BPR ADMIN.
State of Idaho )
   ) ss
County of Ada )

On this ___ day of ________________, 2020, before me, the undersigned
Notary Public, personally appeared Vicki Murgoitio, known to me to be the
person whose name is subscribed to the foregoing instrument, and
acknowledged to me that s/he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official
seal the day and year first written above.

[Signature]
Notary Public for Idaho
Residing at: ________________
Commission Expires: ________________

State of Idaho )
   ) ss
County of Ada )

On this ___ day of ________________, 2020, before me, the undersigned
Notary Public, personally appeared Lauren McLean and Lynda Lowry, known to
me to be the person whose name is subscribed to the foregoing instrument, and
acknowledged to me that s/he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official
seal the day and year first written above.

[Signature]
Notary Public for Idaho
Residing at: ________________
Commission Expires: ________________

RECEIVED
APR 06 2020
BPR ADMIN.
TO: Mayor and Council
FROM: Colin Millar, Purchasing
NUMBER: RES-155-20
DATE: April 13, 2020

BACKGROUND:
The Parks and Recreation Department has future trail building, maintenance, and repair projects in process that only qualified vendors are able to complete.

RECOMMENDATION:
Finance and Administration and Parks & Recreation staff recommend that RFP 17-299(A) be renewed for one (1) year, beginning May 2, 2020, and ending May 1, 2021, not to exceed Budget (task order basis). This is the third (3rd) and final annual renewal allowed by the Agreement.

FINANCIAL IMPACT:
Department has confirmed sufficient funding is available for this obligation.

ATTACHMENTS:
- FB 17-229A FY20-21 Contract Renewal (PDF)
A RESOLUTION APPROVING THE RENEWAL OF RFP 17-299(A), TRAIL BUILDING MAINTENANCE & REPAIR, BETWEEN THE CITY OF BOISE CITY (PARKS & RECREATION) AND CUDDY MOUNTAIN TRAIL COMPANY; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Finance and Administration and Parks & Recreation staff recommended award of RFP 17-299(A), Trail Building Maintenance & Repair, to the best qualified proposers, one of which is Cuddy Mountain Trail Company; and

WHEREAS, during their meeting of March 26, 2019, the City Council followed staff recommendation and awarded Resolution No. 114-19 to Cuddy Mountain Trail Company; and

WHEREAS, the original Agreement contained a clause for renewal; and

WHEREAS, staff recommends the Agreement be renewed for a one-year period; and

WHEREAS, Cuddy Mountain Trail Company has agreed to renew the contract under the terms and conditions as specified in the attached renewal letter; and

WHEREAS, this is the third (3rd) and final renewal allowed by the Agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF BOISE CITY, IDAHO:

Section 1. That the Renewal by and between the city of Boise City and Cuddy Mountain Trail Company for RFP 17-299(A), Trail Building Maintenance & Repair, attached hereto and incorporated herein by reference, be, and the same is hereby, approved as to both form and content.

Section 2. That the Mayor and City Clerk be, and they hereby are, authorized to respectively execute and attest said Agreement for and on behalf of the city of Boise City.

Section 3. That this Resolution shall be in full force and effect immediately upon its adoption and approval.
April 13, 2020

Douglas Hansen
Cuddy Mountain Trail Company
5907 Warfield Road
Cambridge, ID 83610
cuddymtc@gmail.com

RE: Renewal of Boise City RFP 17-299(A); Trail Building Maintenance & Repair, Cuddy Mountain Trail Company, Parks & Recreation, Boise City

Dear Douglas:

In conformance with the terms and conditions of the agreement between your company and Boise City, as stated in RFP 17-299(A), Boise City is interested in renewing the contract for one year, beginning May 2, 2020 and ending May 1, 2021, in an annual amount not to exceed Budget (task order basis). This is the third (3rd) and final renewal allowed by the Agreement.

If you are interested in renewing your agreement, please indicate your acceptance by completing the appropriate area below, signing, and returning the document. Also, please include an updated copy of your current general liability insurance listing Boise City as additional insured, auto insurance and workers' compensation certificates. If applicable, include other certificates requested as well.

The renewal term will be effective upon your receipt of a purchase order from the City. Thank you for your interest in meeting the needs of the City of Boise. Please return signed letter to Purchasing Office, 150 N. Capitol Blvd., PO Box 500, Boise, Idaho 83701-0500.

Sincerely,

Colin Millar
Colin Millar, Purchasing Manager
City of Boise

Please renew the agreement: yes [ ] no [ ]

ACCEPTED BY:

Cuddy Mountain Trail Company
By [Signature]

Print Name

Approved By:

Mayor [Signature]

Date

City Clerk [Signature]

Date

ATTTEST:
TO: Mayor and Council  
FROM: Maureen Brewer, Planning and Development Services  
NUMBER: RES-156-20  
DATE: April 10, 2020  
SUBJECT: CATCH Linda Fund Agreement  

BACKGROUND:

If we want to aid those who don’t access shelter, then we need robust street outreach to build relationships and have a specific caseload with those not accessing care.

Progressive systems of care have street outreach teams (called “Homeless Outreach Street Teams” HOST) that work across multiple agencies, like BPD, Ada County Paramedics, EMS, and Our Path Home. They are robustly designed and specifically serve those experiencing homelessness, allowing a focused approach. Currently, we don’t have anything similar.

There is an urgency here. CATCH just hired 3 street outreach workers to work alongside Our Path Home. This gives us a tremendous opportunity to design a system that wraps around those workers and fits into our existing programming. The hiring of these workers allows Our Path Home to take a community-wide approach to street outreach, for the first time, and to launch a new line of service called Our Path Home OUTREACH.

The Our Path Home OUTREACH team is designed to:

- Work with 250 clients in 2020
- Connect unsheltered people with Our Path Home to get assessed for their housing needs
- Address substance misuse and behavioral health issues for their clients
- NOTE: They do not have funding to pay for housing assistance, like security deposits and rent.

OUTCOME OF OUR EFFORTS
By convening these agencies and investing in street outreach, the City of Boise has the opportunity to achieve these outcomes:

- Create a referral network and clear communication among agencies that work with unsheltered clients
- House 100 clients experiencing homelessness by investing in the rental assistance needed to provide security deposit and rent to a client
  - On average, it costs $1,000 per client to move them off the street and into housing. That includes the average cost of security deposit and first month’s rent for a single adult

**Partners**

These are the agencies, all under the umbrella of Our Path Home, that we would invite to help us design a street outreach system:

- **CATCH**
  - Has hired 3 street outreach workers in the last month.
- Boise Police Department
  - Bike Patrol
  - Behavioral Health Response Team
- Boise Fire Department
  - EMS
- Ada County Paramedics
  - Community Paramedics
- El Ada Community Action Partnership
- U.S. Veterans Administration
- Emergency Shelter

**GRANT OPPORTUNITY**

To make an impact for Our Path Home OUTREACH, we are requesting the below investment to inspire the below impact:
<table>
<thead>
<tr>
<th>Investment</th>
<th>Clients Housed by Investment</th>
<th>Reporting &amp; Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000  Eligible expenses: - Rental Application fees - Rental and Utility arrears - Security Deposit - Rental Assistance</td>
<td>100 households $1,000/household</td>
<td>Quarterly Outcome Reports to Mayor and Council. Compliance &amp; grant structure similar to use of Neighbors in Need fund. Annual Monitoring by Housing &amp; Community Development department</td>
</tr>
</tbody>
</table>

**FINANCIAL IMPACT:**

Up to $100,000.

**ATTACHMENTS:**

- City of Boise Linda Fund Contract (PDF)
Resolution NO. RES-156-20

BY THE COUNCIL

BAGEANT, CLEGG, HALLYBURTON,
SANCHEZ, THOMSON AND
WOODINGS

A RESOLUTION APPROVING AN AGREEMENT, BETWEEN THE CITY OF BOISE
CITY (HOUSING AND COMMUNITY DEVELOPMENT DIVISION OF PLANNING
AND DEVELOPMENT SERVICES) AND CHARITABLE ASSISTANCE TO
COMMUNITY’S HOMELESS (CATCH), INC.; AUTHORIZING THE MAYOR AND
CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT;
AND PROVIDING AN EFFECTIVE DATE.

BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF BOISE
CITY, IDAHO:

Section 1. That the Agreement, between the city of Boise City and Charitable
Assistance to Community’s Homeless (CATCH), Inc., attached hereto and incorporated herein
by reference, be, and the same is hereby, approved as to both form and content.

Section 2. That the Mayor and City Clerk be, and they hereby are, authorized to
respectively execute and attest said Agreement for and on behalf of the city of Boise City.

Section 3. That this Resolution shall be in full force and effect immediately upon its
adoption and approval.
AGREEMENT
by and between
CHARITABLE ASSISTANCE TO COMMUNITY’S HOMELESS (CATCH), INC.
and
BOISE CITY, DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES

This Agreement ("Agreement") for homelessness services is entered into this ___ day of April, 2020 ("Effective Date") by and between Charitable Assistance to Community's Homeless, Inc ("CATCH") and the City of Boise, Department of Planning and Development Services ("City").

WHEREAS, the City is the administrator of Our Path Home, which is a community partnership of nearly 50 agencies who serve those experiencing homelessness; and

WHEREAS, CATCH recently hired 3 street outreach workers to work alongside Our Path Home CONNECT, the partnership’s coordinated entry system, which allows Our Path Home to take a community-wide approach to street outreach, for the first time, and to launch a new line of service called Our Path Home OUTREACH; and

WHEREAS, the Our Path Home OUTREACH team is designed to: work with 250 clients in 2020; connect people experiencing homelessness with Our Path Home to get assessed for their housing needs; and address substance misuse and behavioral health issues for their clients; and

WHEREAS, the Our Path Home OUTREACH team does not have funding to pay for housing assistance, like security deposits and rent; and

WHEREAS, by investing in street outreach, the City of Boise has the opportunity to house as many as 100 clients experiencing homelessness by investing in the rental assistance needed to provide security deposit and rent to a client; and

WHEREAS, Our Path Home’s current data shows that it costs, on average, $1,000 per client to move them off the street and into housing, which includes the average cost of security deposit and first month’s rent for a single adult; and

WHEREAS, Our Path Home’s Linda Fund is designed to increase the capacity of our community to end homelessness by covering gaps of service that exist. The Linda Fund assists those with lower barriers to housing, who can be quickly stabilized through short-term support. The Linda Fund is housed with CATCH; and

WHEREAS, because of the strong public purpose in partnering with entities across the City and ensuring that the City’s most vulnerable populations are housed, the City, for the reasons discussed above, finds that it is in its best interest to provide financial support to the Linda Fund to assist adult only households experiencing homelessness who’s lack of permanent housing could be solved by short term assistance to include first month’s rent and security deposit.
NOW, THEREFORE, it is agreed between the parties as follows:

1. **CATCH’S OBLIGATIONS.**

   A. **Scope of Service.** CATCH will assist adult only households experiencing homelessness whose lack of permanent housing could be solved by short term assistance to include first month’s rent and security deposit (the “Clientele”).

   B. **Selection of Clientele.** CATCH shall select clientele available for funding in accordance with the Linda Fund’s Program Manual and Policies and Procedures, attached hereto as Exhibits A and B.

   C. **Reimbursable Expenses.** Reimbursable expenses shall include: 1) Security deposits (up to 2x the monthly rental amount), 2) first month’s rent, and 3) other related payments deemed necessary in the City’s discretion; provided that CATCH fully complies with all administrative requirements set forth in Section 7, herein.

   D. **Compliance and Performance Monitoring.** The City will monitor the performance of the CATCH against goals and performance standards required herein. Substandard performance as determined by the City will constitute non-compliance with this agreement. If action to correct such substandard performance is not taken by the CATCH within a specified period of time after notification by the City, Agreement suspension or termination procedures may be initiated at the discretion of the City.

2. **CITY’S OBLIGATIONS.** Provided that CATCH performs in compliance with this Agreement, City shall reimburse CATCH those expenses set forth above.

3. **TIME OF PERFORMANCE/AGREEMENT TERM.** This Agreement shall commence on its Effective Date and shall be completed by March 31, 2021.

4. **BUDGET.** It is expressly agreed and understood that the maximum amount available under this Agreement shall not exceed One Hundred Thousand dollars and no/100s ($100,000.00). Reimbursement to CATCH of any or all of this amount is contingent upon City approval of this agreement, City approval of reimbursement requests, presentation of acceptable insurance certificates, and a determination by the City that CATCH is performing in accordance within this agreement. Eligible expenses incurred will be reimbursed for activities performed on or after the Effective Date.

5. **NOTICES.** Communication and details concerning this Agreement shall be directed to the following Agreement representatives:
   
   **City:** Maureen Brewer  
   Our Path Home Administrator,  
   Division of Housing and Community Development  
   City of Boise  
   150 N. Capitol Blvd.  
   Boise, Idaho 83702
CATCH: Stephanie Day, Executive Director
503 Americana Boulevard
Boise, Idaho 83702
sday@catchprogram.org

mbrewer@cityofboise.org

6. GENERAL CONDITIONS

A. General Compliance: CATCH agrees to comply with all other applicable federal, state and local laws, regulations, and policies governing the funds provided under this Agreement. CATCH further agrees to utilize funds available under this agreement to supplement rather than supplant funds otherwise available.

B. Independent Contractor: Nothing contained in this agreement is intended to or shall be construed in any manner as creating or establishing the relationship of employer/employee between the parties. CATCH, any officer, employee or agent of CATCH shall at all times remain an independent contractor with respect to the services to be performed under this agreement.

The City shall be exempt from payment of Unemployment Compensation, FICA, retirement, life and/or medical insurance and Workers’ Compensation Insurance for the services performed under this agreement.

The selection and designation of the personnel of the City in the performance of the agreement shall be made by the City.

C. Worker’s Compensation: CATCH shall provide Workers’ Compensation Insurance coverage for its employees involved in the performance of this Agreement. In case any such portion of this agreement is sublet, CATCH shall require the subcontractor provide Workers Compensation Insurance for the latter’s employees involved in the performance of this Agreement. CATCH shall provide the City with a Certificate of Insurance evidencing the CATCH’s compliance with the requirements of this section.

D. Insurance and Bonding: CATCH shall carry sufficient insurance coverage to protect Agreement assets from loss due to theft, fraud, and/or undue physical damage, and at a minimum shall purchase a blanket fidelity bond covering its employees in an amount equal to reimbursement from the City.

CATCH shall indemnify and save and hold harmless the City from and for any losses, claims, actions, judgments for damages, or injury to persons or property and losses and expenses caused or incurred by the CATCH, its servants, agents, employees, guests, and business invitees, and not caused by or arising out of the tortious conduct of the City or its employees. In addition, CATCH shall maintain
and specifically agrees that it will maintain, commencing upon execution of the agreement and continuing thereafter throughout the term of this agreement, liability insurance, in which the City shall be named as an additional insured in the minimum amount specified in the Idaho Tort Claims Act set forth in Title 6, Chapter 9 of the Idaho Code.

The limits of insurance shall not be deemed a limitation of the covenants to indemnify and save and hold harmless the City; and if the City becomes liable for an amount in excess of the insurance limits herein provided, CATCH covenants and agrees to indemnify and save and hold harmless the City from such losses, claims, actions, or judgments for damages or liability to persons or property. CATCH shall provide the City with a certificate of insurance, or other proof of insurance evidencing CATCH’s compliance with the requirements of this section and file such proof of insurance with the City. In the event the insurance minimums are changed, CATCH shall immediately submit proof of compliance with the changed limits.

E. **City Recognition:** CATCH shall ensure recognition of the role of the City in providing services through this Agreement. Activities, facilities and items utilized pursuant to this Agreement shall be prominently labeled as to funding source. In addition, CATCH will include a reference to the support provided herein in publications made possible with funds made available under this Agreement. An example would read, “This project is made possible by funding made available through the City of Boise.”

F. **Amendments:** The City or CATCH may amend this agreement at any time provided that such amendments make specific reference to this agreement, and are executed in writing, signed by a duly-authorized representative of both organizations, and approved by the City’s governing body. Such amendments shall not invalidate this agreement, nor relieve or release the City or CATCH from its obligations under this agreement.

The City may, in its discretion, amend this agreement to conform with federal, state or local governmental guidelines, policies and available funding amounts, or for other reasons. If such amendments result in a change in the funding, the scope of activities to be undertaken as part of this agreement, such modifications will be incorporated only by written amendment signed by both the City and/or the CATCH.

G. **Suspension or Termination:** Either party may terminate this Agreement at any time by giving written notice to the other party of such termination and specifying the effective date thereof at least thirty (30) days before the effective date of such termination. Partial terminations of the Scope of Services may only be undertaken with the prior approval of the City.
Without limiting either party’s right to terminate this agreement without cause, CATCH agrees that City may immediately amend or terminate this agreement at any time if it is determined that funds allocated for this project have been misused, used for ineligible activities or ineligible recipients, or used in an inconsistent manner with the conditions of the application, this agreement, or any federal, state or local governing regulations, policies, or procedures.

7. **ADMINISTRATIVE REQUIREMENTS**

A. **Documentation and Recordkeeping**

1. **Records to be Maintained:** CATCH shall maintain all records in accordance with generally accepted accounting principles, procedures and practices, and any other regulations that are pertinent to the activities to be funded under this agreement which shall sufficiently and properly reflect all revenues and expenditures of funds provided directly or indirectly by the City pursuant to the terms of this Agreement, which shall include but not be limited to:

   a. A cash receipt journal, cash disbursement journal, general ledger, and all such subsidiary ledgers as be reasonably necessary;

   b. Records providing a full description and eligibility of each activity undertaken and individuals served;

   c. Records demonstrating that each activity undertaken meets one or more of the mission objectives under the Agreement; and

   e. Other records necessary to document compliance as outlined under the Agreement.

2. **Retention:** CATCH shall retain all records pertinent to the expenditures incurred under this Agreement for a period of five (5) years after the conclusion or termination of all activities funded under this agreement.

   Records for non-expendable property acquired with funds under this Agreement shall be retained for five (5) years after final disposition of such property.

   Notwithstanding the above, if there is litigation, claims, audits, negotiations or other actions that involve any of the records cited and that have started before the expiration of the five (5) year period, then such records must be retained until completion of the actions and resolutions of all issues, or the expiration of the five (5) year period, whichever occurs later.

3. **Access to Records:** CATCH shall furnish and cause each of its own CATCHs or subcontractors to furnish all information and reports required
hereunder and will permit access to its books, records, and accounts by the City, for purposes of investigation to ascertain compliance with the rules, regulations and provisions stated herein.

4. **Applicant/Beneficiary Data:** CATCH shall maintain client data demonstrating client eligibility for services provided. Such data shall include, but not be limited to income level or other basis for determining eligibility, and description of service provided. Such information shall be made available for review upon the City’s request.

5. **Confidentiality:** CATCH understand that client information collected under this Agreement is private and the use or disclosure of such information, when not directly connected with the administration of the City or CATCH’s responsibilities with respect to services provided under this Agreement, is prohibited by law unless written consent is obtained from such person receiving service and, in the case of a minor, that of a responsible parent/guardian.

6. **Close-Outs:** CATCH’s obligation to the City shall not end until all close-out requirements are completed. Activities during this close-out period shall include, but are not limited to: making final payments, disposing of program assets (including the return of all unused materials, equipment, unspent cash advances, program income balances, and accounts receivable to the City), and determining the custodianship of records.

7. **Audits and Inspections:** Records with respect to any matters covered by this agreement shall be made available to the City, grantor agency or their designees, at any time during normal business hours, as often as the City deems necessary, to audit, examine, and make excerpts or transcripts of all relevant data.

Any deficiencies noted in audit reports must be fully cleared by CATCH within thirty (30) days after receipt by CATCH. Failure of CATCH to comply with the above audit requirements will constitute a violation of this Agreement and may result in the withholding of future payments.

CATCH hereby agrees to provide two (2) copies of an annual certified public accountant’s opinion and related financial statements on the organization to the City no later than one hundred eighty (180) calendar days following the end of CATCH’s fiscal year, for each year during which this agreement remains in force or until all funds earned from this agreement have been so audited, whichever is later, provided that CATCH has such an opinion prepared.

CATCH shall include in all the City approved subcontracts used to engage subcontracts to carry out any eligible substantive programmatic services,
as such services are described in this agreement, each of the recordkeeping and audit requirements detail in this Agreement. The City shall, in its sole and absolute discretion, determine when services are eligible substantive programmatic services and subject to the audit and recordkeeping requirements described above.

B. Reimbursement Procedures and Reporting

1. **Reimbursement:** The City will reimburse CATCH funds available under this agreement based upon information submitted by the CATCH and consistent with the approved budget summary, the eligibility of costs, and City policy concerning reimbursements.

Reimbursement requests shall be submitted in a format agreed upon by both parties. Requests shall be accompanied by supporting documentation providing evidence of CATCH expenditures.

The amount of each reimbursement request must be limited to eligible costs incurred where CATCH has provided documentation acceptable to the City. CATCH may amend the budget by submitting a revised budget summary to the City for approval.

CATCH agrees to submit all reimbursement requests within fifteen (15) calendar days from the close of each month of the program except for the final reimbursement request and to forfeit reimbursement for any costs not requested within this timeframe unless otherwise authorized by City.

CATCH agrees to submit the final reimbursement request no later than twenty (20) days from the close of the program year.

2. **Progress Reports:** CATCH agrees to submit quarterly narrative progress reports within fifteen (15) days of the close of each quarter of the program.

8. OTHER CONDITIONS.

A. **Attorney Fees.** Should any litigation be commenced between the parties hereto concerning this Agreement, the prevailing party shall be entitled, in addition to any other relief as may be granted, to court costs and reasonable attorneys' fees as determined by a Court of competent jurisdiction. This provision shall be deemed to be a separate contract between the parties and shall survive any default, termination or forfeiture of this Agreement.

B. **Time is of the Essence.** The parties hereto acknowledge and agree that time is strictly of the essence with respect to each and every term, condition and provision hereof, and that the failure to timely perform any of the obligations hereunder shall constitute a breach of, and a default under, this Agreement by the party so failing to perform.

C. **Force Majeure.** Any delays in or failure of performance by CATCH shall not
constitute a breach or default hereunder if and to the extent such delays or failures of performance are caused by occurrences beyond the reasonable control of CATCH, including but not limited to, acts of God or the public enemy; compliance with any order or request of any governmental authority; fires, floods, explosion, accidents; riots, strikes or other concerted acts of workmen, whether direct or indirect; or any causes, whether or not of the same class or kind as those specifically named above, which are not within the reasonable control of CATCH. In the event that any event of force majeure as herein defined occurs, CATCH shall be entitled to a reasonable extension of time for performance of its Services under this Agreement.

D. Assignment. It is expressly agreed and understood by the parties hereto, that CATCH shall not have the right to assign, transfer, hypothecate or sell any of its rights under this Agreement except upon the prior express written consent of City.

E. Discrimination Prohibited. In performing the Services required herein, CATCH, its sub-recipients, or subcontractors shall not discriminate against any person on the basis of race, color, religion, sex, sexual orientation, gender identity/expression, national origin or ancestry, age or disability. It is CATCH's responsibility to ensure that sub-contractors are in compliance with this section.

F. Changes. The City may, from time to time, request changes in the Scope of Services to be performed hereunder. Such changes, including any increase or decrease in the amount of CATCH's compensation, which are mutually agreed upon by and between the City and CATCH, shall be incorporated in written amendments to this Agreement.

G. Severability. If any part of this Agreement is held to be invalid or unenforceable, such holding will not affect the validity or enforceability of any other part of this Agreement so long as the remainder of the Agreement is reasonably capable of completion.

H. Entire Agreement. This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

I. Non-Appropriation. Should funding become not available, due to lack of appropriation, the City may terminate this agreement upon 30 (thirty) days’ notice.

J. Applicable Law. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Idaho, and the ordinances of the City of Boise.

K. Approval Required. This Agreement shall not become effective or binding until approved by the City.
IN WITNESS WHEREOF, the parties have executed this agreement as of the date first written above.

CITY OF BOISE
APPROVED BY:

Lauren McLean, Mayor Date

CATCH

By: Stephanie Day, Executive Director

ATTEST:

City Clerk Date

AGREEMENT AMOUNT: not to exceed $100,000.00
The Linda Fund

Program Manual

Updated 3/13/2020
The Linda Fund is a program established to assist households who can maintain themselves in housing, but whose barrier to accessing housing is move in costs. The program details are explained below.

Eligibility Criteria

- Households experiencing category 1 or 4 homelessness
- 80% AMI or below, with a preference for households at 50% AMI or below (subject to availability as funding sources allow)
- Currently residing in Ada County
- Sustainable financial circumstances
- If the household has received Linda Fund assistance in the last 12 months, a review will be conducted to determine if more intensive programming would be needed to maintain housing stability

Financial Assistance

- First month’s rent
- Deposit (double deposit of two times rental amount is eligible)
  - Program can also pay a Last Month’s Rent only in the event of a single deposit, first month’s and last month’s rent.
- Funding only offered, as availability allows
- Certain funding streams may have additional requirements and criteria for assistance

Documentation Requirements

- Program Agreement (executed by program staff and client)
- Verification of category 1 or 4 homelessness
- Income verification from previous 30 days of date of program approval
- Housing Quality Standards Inspection form
- Verification that rent is not more than 60% of client’s income.
- Review lease
- Signed lease
  - Each program participant receiving rental assistance must have a legally binding, written lease for the rental unit. The lease must be between the owner and the program participant. The lease must have an initial term of 1 year. Each lease must include a lease provision or incorporate a lease addendum that includes all requirements and legal protections that apply to tenants.
## APPENDIX B

### Ada County AMI Matrix

<table>
<thead>
<tr>
<th></th>
<th>1 Person</th>
<th>2 Person</th>
<th>3 Person</th>
<th>4 Person</th>
<th>5 Person</th>
<th>6 Person</th>
<th>7 Person</th>
<th>8 Person</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Below 30%</strong></td>
<td>$0-13,099</td>
<td>$0-16,019</td>
<td>$0-20,159</td>
<td>$0-24,299</td>
<td>$0-28,439</td>
<td>$0-32,579</td>
<td>$0-36,729</td>
<td>$0-40,889</td>
</tr>
<tr>
<td><strong>30% AMI</strong></td>
<td>$13,100</td>
<td>$16,020</td>
<td>$20,160</td>
<td>$24,300</td>
<td>$28,440</td>
<td>$32,580</td>
<td>$36,730</td>
<td>$40,890</td>
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<tr>
<td><strong>50% AMI</strong></td>
<td>$21,850</td>
<td>$25,000</td>
<td>$28,000</td>
<td>$31,200</td>
<td>$33,700</td>
<td>$36,200</td>
<td>$38,700</td>
<td>$41,200</td>
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<tr>
<td><strong>80% AMI</strong></td>
<td>$34,950</td>
<td>$39,950</td>
<td>$44,950</td>
<td>$49,900</td>
<td>$53,900</td>
<td>$57,900</td>
<td>$61,900</td>
<td>$65,900</td>
</tr>
</tbody>
</table>
APPENDIX C

Application
- Complete application

Documentation
- Homelessness Verification
- Income Verification
- Budget
- W9 from landlord

Inspection
- HQS Inspection
- Follow up, if necessary

Payment
- OPH Program Director approves case
- Financial Process:
  - Designated staff member fills out Initial Household Expense Form.
  - Presents it to Executive Director for signature and writing of an in-house check
  - Designated staff member makes copy of check and submits it to Administrative Ass't for billing
- Designated staff member delivers check to participating landlord
Our Path Home
Linda Fund – OUTREACH
March 2020

Linda Fund OUTREACH dollars will follow the monitoring guidelines set forth for Continuum of Care program funds. Generally, those include the following:

Process
- Enrollment in Our Path Home CONNECT: ensure participants are assessed and referred to Our Path Home CONNECT
  Note: Agency has policies and procedures for monitoring to ensure compliance for reimbursement of funds. Recommended that agency be monitored within first three months to ensure compliance.
- Eligibility: ensure documentation of a participant’s homelessness and disability (if applicable) is entered in HMIS
- Housing Quality Standards: ensure units assisted with Linda Fund – OUTREACH meet HQS at lease-up
- Leasing and Rental Assistance Requirements: ensure rents charged meet FMR or rent reasonableness
- Examination of Income: examine participant income documentation at intake
- Use of HMIS: ensure participants are entered in HMIS
- Eligible expenses: rental application fees, rental and utility arrears, security deposit, rental assistance. *The current average cost for a security deposit and 1st month’s rent for a single adult is $1,000.
  Note: At minimum, documentation demonstrating eligibility of paid expenses would be required to be submitted to the City for reimbursement.

Outcomes
Goal: House 100 clients currently experiencing unsheltered homelessness through Linda Fund – OUTREACH dollars.
- # clients served: caseload of 3 OUTREACH FTE
- # clients with SPMI or SPMI and substance use
- # clients moved directly from an unsheltered location into permanent housing, including cost per client

Challenges
- Many clients that are currently unsheltered have no income; we need to connect them to SOAR to receive their SSI benefits. This is a long application and process with no dedicated staff. Currently working on a partnership with Department of Health and Welfare for CATCH to become the SOAR lead agency for Our Path Home.
- Housing market, current vacancy rate and availability of affordable units
TO: Mayor and Council  
FROM: Colin Millar, Accounting  
NUMBER: RES-157-20  
DATE: April 17, 2020  
SUBJECT: FB 20-285C: Travel Trailers: PW: Camping World NTE $102,798.00  

BACKGROUND:

The Public Works Department is requesting authorization to purchase up to 23 travel trailers from multiple area dealers for a total cost of $355,203. The contracts with each dealer begin with an option to purchase which, if exercised, would require the dealer to deliver trailers within forty-eight hours to a specified water renewal facility. The trailers would then be used to provide accommodations for essential Water Renewal Facility staff giving staff the ability to shelter in place at the facilities in the event of further widespread infection of COVID-19.

Operation of the Water Renewal Facilities is an essential function that is needed in order to protect the health and safety of Boise citizens. The virus that causes COVID-19 has been detected in the feces of some patients diagnosed with COVID-19, according to the Center for Disease Control and Prevention. Proper operation of Water Renewal Facilities is effective at inactivating the virus, and therefore continued operation of these facilities is critical to the health and well-being of the community.

The greatest risk to continued operations of the water renewal facilities during this pandemic is the health and well-being of the operations and maintenance staff who have highly specialized skill sets that ensure the facilities continue to function. Without this staff, the facilities cannot function properly.

The Public Works Department has developed and continues to update emergency plans to safeguard the operations of the Water Renewal Facilities. The plans included specific actions as certain events, or situations arise. The department has closely monitored the actions and results of other utilities and found utilities are trending towards having critical infrastructure employees
shelter in place if and when the virus becomes more widespread. Sheltering the staff in place is in an effort to minimize the risk of contracting and spread of the virus by providing a much more controlled environment. The concept would be to have minimum number of staff shelter in place at the facilities for several days straight and rotate out as determined viable. In doing so, the Public Works Department is pursuing providing travel trailers for staff to reside in while they are on continuous duty cycles.

Public Works, Purchasing, and Legal staff reviewed several options related to providing accommodations for Water Renewal Staff and determined that purchasing travel trailers was the preferred alternative. The trailers offer fast deployment, are readily available, allow separation of staff, and provide a reasonable accommodation for staff to rest. Purchase versus lease and rental options were also analyzed, but it was determined that the risk, cost, and availability of rental or lease with an unknown timeline the trailers would be needed made purchasing the trailers the preferred alternative.

In lieu of requesting public bid on a nationwide basis, Public Works and Purchasing solicited quotes from several local dealers. Both departments feel this method still provides price competitions but allows for quick deployment, local inspection, and minimizes out of area travel and transport. All of the vendors contacted have shown a great willingness to support our community, either by reducing or eliminating their profit.

The purchase costs may be eligible for reimbursement through FEMA therefore the departments are taking the necessary measures in order to request reimbursement. If reimbursement for exigent circumstances by FEMA is not attainable, the units will be surplused at a later time in accordance with City policy and rules.

**BID RESULTS:**

The proposals were opened April 6, 2020, at noon local time. Competitive pricing proposals were solicited from five (5) companies. Four (4) proposals were received. Awards for each of the responsive bidders are recommended separately and distinguished by FB 20-285A, FB 20-285B, and FB 20-285D.

<table>
<thead>
<tr>
<th>BIDDER</th>
<th>TOTAL BID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bish’s RV</td>
<td>$84,105.00</td>
</tr>
</tbody>
</table>
Public Works Department staff reviewed the bids for accuracy, completeness, and responsiveness. One of lowest responsive bidders, Camping World, has been contacted by Public Works Department staff and indicated that they would like to proceed with the project.

**RECOMMENDATION:**

Finance and Administration and Public Works Department staff recommend that FB 20-285C is awarded to one of the lowest responsive bidders, Camping World, not to exceed $102,798.00. Award of this contract is subject to compliance requirements.

**FINANCIAL IMPACT:**

Department has confirmed sufficient funding is available for this obligation.

**ATTACHMENTS:**

- FB 20-285(C) Contract for council   (PDF)
- FB 20-285 Specs   (MSG)
- FB 20-285 Addendum 1   (MSG)
- FB 20-285 Addendum 2   (MSG)
- FB 20-285C Quote   (XLSX)
CITY OF BOISE

Resolution NO. RES-157-20

BY THE COUNCIL

BAGEANT, CLEGG, HALLYBURTON,
SANCHEZ, THOMSON AND
WOODINGS

A RESOLUTION APPROVING AN AGREEMENT AND AWARD FOR FB 20-285C; TRAVEL TRAILERS, BETWEEN THE CITY OF BOISE CITY (PUBLIC WORKS DEPARTMENT) AND CAMPING WORLD; AUTHORIZING THE MAYOR AND CITY CLERK TO RESPECTIVELY EXECUTE AND ATTEST SAID AGREEMENT AND AWARD; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Finance and Administration and Public Works Department staff recommend award of FB 20-285C: Travel Trailers, to one of the lowest, responsive bidders, Camping World.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF BOISE CITY, IDAHO:

Section 1. That the Agreement and Award for FB 20-285C: Travel Trailers by and between the city of Boise City and Camping World, attached hereto and incorporated herein by reference, be, and the same is hereby, approved as to both form and content.

Section 2. That the Mayor and City Clerk be, and they hereby are, authorized to respectively execute and attest said Agreement and Award for and on behalf of the city of Boise City.

Section 3. That this Resolution shall be in full force and effect immediately upon its adoption and approval.
OPTION TO PURCHASE/PURCHASE CONTRACT AGREEMENT
PURCHASING CONTRACT NUMBER FB 20-285C

Project: Travel Trailers
Vendor: Bodily RV, Inc. dba Camping World RV Sales
Owner: Public Works Department, City of Boise, Ada County, Idaho, a municipal corporation

THIS OPTION TO PURCHASE/PURCHASE AGREEMENT (“Agreement”) is made this ______ day of ________, 2020 (“Effective Date”), by and between the City of Boise, a municipal corporation organized under the laws of the State of Idaho (“City”), and Bodily RV, Inc. d/b/a Camping World RV Sales (“Dealer”), duly authorized to do business in the State of Idaho.

1. Purchase Option: For a period of Sixty (60) calendar days beginning on the Effective Date (“Option Period”), Dealer grants City the exclusive right and option to purchase some or all of the trailers specified in Section 2 herein and to have the purchased trailers delivered within a forty-eight (48) hour period (“Purchase Option”).

City will compensate Dealer for the Purchase Option through payment of a four hundred ninety dollar ($490.00) retainage fee per trailer unit specified in Section 2 below. Upon execution of this Agreement, Dealer will invoice City for the retainage fees and, within thirty (30) calendars days of City’s receipt of the invoice, City will make payment to Dealer. In the event City does not exercise the Purchase Option with respect to each trailer unit specified in Section 2 below, Dealer shall retain the full retainage fee for each unpurchased trailer unit. In the event City chooses to exercise the Purchase Option, the retainage fee applicable to each purchased trailer shall be applied towards the trailer’s purchase price.

To exercise the Purchase Option, City will notify Dealer that it is choosing to exercise the Purchase Option, specify whether it is choosing to purchase some or all of the trailers subject to the Purchase Option, and identify the specific physical location in Ada County for delivery. Dealer shall deliver the purchased trailers to the specified location within forty-eight (48) hours of delivery of the notice.

At all times during the Option Period, Dealer shall have all of the trailers specified in Section 2 physically present in Ada County, Idaho and ready for delivery to the location specified by the City and Dealer shall deliver the purchased trailers within forty-eight (48) hours of delivery of the City’s notice to Dealer that it will exercise the Purchase Option.

When the Option Period expires, the Purchase Option for any trailers that City has not yet purchased shall expire and become null and void.

2. Statement of Work: As of the Effective Date and at all times during the Option Period, Dealer shall have the following trailer units available for City purchase and forty-eight hour delivery at the following price per unit:

One (1) new/unused Dutchman Model 17fqwe, Model Year 2020 at $15,114
Three (3) new/unused Keystone Model 175LHS, Model Year 2020 at $14,114 per unit
Three (3) new/unused Keystone Model 176LHS, Model Year 2020 at $15,114 per unit
3. Guarantee/Warranty: Dealer guarantees that each trailer identified in Section 2 above that the City elects to purchase will meet or exceed the minimum specifications set forth in Dealer’s proposal, which proposal is attached hereto and incorporated herein. If upon or subsequent to delivery of a trailer City finds that the trailer does not conform to the proposal specifications, Dealer will be required, at its own expense, to promptly make all corrections necessary to bring the trailer into compliance. Trailers shall be purchased subject to all terms and conditions contained in Dealer’s purchase agreement. The guarantees and warranties referenced in this Section 3 shall survive the expiration or termination of this Agreement.

4. Amount of Contract: Total purchases made under this Agreement shall not exceed the amount of one hundred two thousand seven hundred ninety-eight dollars (§ 102,798). If City chooses not to exercise the Purchase Option for any trailers then the total amount due and owing from City to Dealer under this Agreement is three thousand four hundred thirty dollars ($3,430.00), which sum consists of the retainage fee per trailer identified in Section 2.

5. Indemnification and Insurance: Each party shall indemnify and save and hold harmless the other from and for any and all losses, claims, actions, judgments for damages, or injury to persons or property and losses and expenses caused or incurred by the gross negligence or intentional act or omission of the other party, or such party’s servants, agents, employees, guests, and business invitees. An indemnifying party’s obligation shall not extend to the tortious conduct of the indemnified party, or its employees. Each party shall maintain commercial general liability insurance with limits not less than $500,000 per occurrence and $1,000,000 in the aggregate. The limits of insurance shall not be deemed a limitation of the indemnifying party’s covenants described in this Agreement.

Additionally, Dealer shall have and maintain during the life of this contract, statutory Workers Compensation, regardless of the number of employees, or lack thereof, to be engaged in work on the project under this Agreement (including himself) in the statutory limits as required by law.

6. Independent Contractor: In all matters pertaining to this Agreement, Dealer shall be acting as an independent contractor, and neither Dealer, nor any officer, employee or agent of Dealer will be deemed an employee of City. The selection and designation of the personnel of the City in the performance of this Agreement shall be made by City.

7. Method of Payment: Dealer will invoice City’s Public Works Department directly for the purchase price of any trailer unit(s) the City chooses to purchase during the Option Period and City will pay purchase invoices within forty-five (45) calendar days of City’s receipt of the invoices.

8. Notices: Any and all notices required or permitted to be given by either of the parties hereto, unless otherwise stated in this Agreement, shall be in writing and be deemed communicated when mailed in the United States mail, certified, return receipt requested or e-mailed and addressed as follows:

City of Boise  
Public Works Department  
PO Box 500  
Boise, Idaho 83701-0500

Bodily Rv, Inc. d/b/a Camping World RV Sales  
1580 W. Overland Rd  
Meridian, Idaho 83642

With a copy to:
Either party may change their address for the purpose of this paragraph by giving written notice of such change to the other in the manner herein provided.

9. **Attorney Fees**: Should any litigation be commenced between the parties hereto concerning this Agreement, the prevailing party shall be entitled, in addition to any other relief as may be granted, to court costs and reasonable attorneys’ fees as determined by a court of competent jurisdiction. This provision shall be deemed to be a separate contract between the parties and shall survive any default, termination, or forfeiture of this Agreement.

10. **Time is of the Essence**: The parties hereto acknowledge and agree that time is strictly of the essence with respect to each and every term, condition and provision hereof, and that the failure to timely perform any of the obligations hereunder shall constitute a breach of, and a default under, this Agreement by the party so failing to perform.

11. **Force Majeure**: Any delays in or failure of performance by Dealer shall not constitute a breach or default hereunder if and to the extent such delays or failures of performance were unforeseeable and caused by occurrences beyond the reasonable control of Dealer, including but not limited to, acts of God or the public enemy; compliance with any order or request of any governmental authority; fires, floods, explosion, accidents; riots, strikes or other concerted acts of workmen, whether direct or indirect. In the event that any event of force majeure as herein defined occurs, Dealer shall be entitled to a reasonable extension of time for performance of its obligations under this Agreement.

12. **Assignment**: It is expressly agreed and understood by the parties hereto, that Dealer shall not have the right to assign, transfer, hypothecate or sell any of its rights under this Agreement except upon the prior express written consent of City.

13. **Discrimination Prohibited**: In performing its obligations as required herein, Dealer, Dealer’s sub-recipient, or Dealer’s subcontractor shall not discriminate against any person on the basis of race, color, religion, sex, sexual orientation, gender identity/expression, national origin or ancestry, age or disability. It is Dealer’s responsibility to ensure that its sub-contractor, if any, is in compliance with this section.

Further, if this is a Department of Transportation assisted contract, the Contractor shall carry out applicable requirements of 49 C.F.R. Part 26 in the award and administration of the contract. It is the Contractor’s responsibility to ensure that all sub-contractors are in compliance with these requirements as well. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the City deems appropriate.

14. **Access to Records**: The following access to records requirements apply to this Agreement: (1) Dealer agrees to provide City, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of Dealer which are directly pertinent to this Agreement for the purposes of making audits, examinations, excerpts, and transcriptions. (2) Dealer agrees to permit any of the foregoing parties to reproduce by any means
whatsoever or to copy excerpts and transcriptions as reasonably needed. (3) Dealer agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the Agreement. (4) In compliance with the Disaster Recovery Act of 2018, City and Dealer acknowledge and agree that no language in this Agreement is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

15. **Compliance with Laws:** In performing its obligations as required hereunder, Dealer shall comply with all applicable laws, ordinances, and codes of the State of Idaho, County of Ada, City of Boise. In addition, Dealer acknowledges that FEMA financial assistance may be used to reimburse City for all or a portion of amounts expended under this Agreement and Dealer will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures and directions. Dealer acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to Dealer’s actions pertaining to this Agreement.

16. **No Obligation by Federal Government.** The Federal Government is not a party to this Agreement and is not subject to any obligations or liabilities to the City, Dealer, or any other party pertaining to any matter resulting from the Agreement.

17. **Amendments:** Any change, modification or amendment to this Agreement must be in writing and signed by authorized representatives of both City and Dealer. The purchase price per trailer unit may not be increased by Amendment during the Option Period.

18. **Termination for Cause:** If, through any cause, Dealer shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if Dealer shall violate any of the covenants, agreements, or stipulations of this Agreement, City shall thereupon have the right to terminate this Agreement by giving written notice to Dealer of such termination and specifying the effective date thereof at least fifteen (15) days before the effective date of such termination. If this Agreement is terminated for cause, Dealer shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

Notwithstanding the above, Dealer shall not be relieved of liability to City for damages sustained by City by virtue of any breach of this Agreement by City, and City may withhold any payments to Dealer for the purposes of set-off until such time as the exact amount of damages due City from Dealer is determined. This provision shall survive the termination of this Agreement and shall not relieve Dealer of its liability to City for damages.

19. **Termination for Convenience of City:** City may terminate this Agreement at any time for its convenience and without penalty by giving at least fifteen (15) days’ notice in writing to Dealer. If the Agreement is terminated by City as provided herein, Dealer will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of Dealer covered by this Agreement, less payments of compensation previously made. If this Agreement is terminated due to the fault of Dealer, Section 18 hereof relative to termination shall apply.

20. **Dealer to Pay or Secure Taxes:** Dealer shall pay when due when all taxes (other than on real property), excises and license fees due the state, its subdivisions, and municipal and quasi-municipal corporations therein, accrued or accruing in accordance with conditions of this Agreement.
21. **Severability:** If any part of this Agreement is held to be invalid or unenforceable, such holding will not affect the validity or enforceability of any other part of this Agreement so long as the remainder of the Agreement is reasonably capable of completion.

22. **Non-Appropriation:** Should funding become not available due to lack of appropriation, City may terminate this Agreement upon 30 (thirty) days' notice.

23. **Term:** This Agreement shall not be valid for more than One Year from the date of execution by City.

24. **Entire Agreement:** This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

25. **Applicable Law/Jurisdiction/Venue:** This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Idaho, and the ordinances of the City of Boise. The parties agree that any legal disputes between the parties in connection with this Agreement shall be brought and maintained in the state or federal courts located in Ada County, Idaho and each party hereby irrevocably submits to the jurisdiction of such courts.

26. **Clean Air Act**
   1. Dealer agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. 2. Dealer agrees to report each violation to City and understands and agrees that City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office. 3. Dealer agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

27. **Federal Water Pollution Control Act**
   1. Dealer agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. 2. Dealer agrees to report each violation to City and understands and agrees that City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office. 3. Dealer agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

28. **Suspension and Debarment**
   (1) This Agreement is or may become a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, Dealer is required to verify that none of its principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). (2) Dealer must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. (3) This certification is a material representation of fact relied upon by City. If it is later determined that Dealer did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to City, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.
29. **Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended).** Contractors who apply or bid for an award of $100,000 or more shall file the required certification, which is attached hereto as Appendix I. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

30. **Procurement of Recovered Materials.** In the performance of this Agreement, Dealer shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—1. Competitively within a timeframe providing for compliance with the contract performance schedule; 2. Meeting contract performance requirements; or 3. At a reasonable price. ii. Information about this requirement, along with the list of EPA designated items, is available at EPA’s Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program. iii. Dealer also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

31. **Seal, Logo, Flags.** Dealer shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval. Dealer shall not use City of Boise seals or logos without specific pre-approval from the City.

32. **Approval Required:** This Agreement shall not become effective or binding until approved by the City of Boise through City Council Resolution and execution by the Mayor of the City of Boise.

33. **Acceptance and Final Payment:** Upon receipt of notice that a purchased trailer is ready for final acceptance and inspection, a representative of the City will make such inspection and when he finds the work acceptable and the contract fully performed he will have the Dealer issue a final payment request.

34. **Counterparts.** This Agreement may be executed in counterparts, each of which shall be deemed an original, and such counterparts shall constitute one and the same instrument. A signed copy of this Agreement delivered by e-mail shall be deemed to have the same legal effect as delivery of an original signed version of this Agreement.

35. **Non-Exclusive Relationship.** The relationship between the parties is non-exclusive and City is not in any way restricted from soliciting, receiving and contracting with third parties for the same or similar subject matter of this Agreement.

36. **Authorized Signatory.** The person executing this Agreement on behalf of Dealer warrants that he/she has Dealer’s full authorization to do so and that his/her execution of this Agreement is in conformance with applicable legal and organizational authorities.

**END OF AGREEMENT**
FB 20-285C

IN WITNESS WHEREOF, the City and the Dealer have executed this Agreement as of the date first above written.

Bodily RV, Inc.
1580 W. Overland Road
Meridian, Idaho 83642

_________________________  April 16, 2020
Signature                    Date

____ Brent Moody _________
Print Name

____ President _________
Title

ACKNOWLEDGMENT

State of Idaho )
: ss.
County of ______ )

On the _____ day of ________________ , _____, before me, the undersigned Notary Public, personally appeared ________________________, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that s/he executed the same.

IN WITNESS WHEREOF, I have set my hand and seal the day and year as above written.

________________________________________
Notary Public for Idaho

Residing at ________________________________
Commission Expires: ______________________
FB 20-285C

APPROVED AS TO FORM AND CONTENT:

[Signature]
04/09/2020

Department
Date

[Signature]
4-9-20
Purchasing Agent
Date

[Signature]
4/9/2020
Legal Department
Date

CITY OF BOISE

APPROVED BY:

[Signature]
Date

Mayor

ATTEST:

[Signature]
Date

City Clerk

CONTRACT AMOUNT:
NTE $102,798
Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form–LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature: __________
Date: __________

Printed Name: Brent Moody, President
Good afternoon,

The City of Boise is preparing to secure accommodations for Water Renewal and Utility Maintenance Staff in the event we need a group to shelter in place during this pandemic. In the event the situation warrants us to shelter staff in place in order to ensure operations of the facilities, we would like the staff doing so to have reasonable accommodations.

Can you please supply me with a list of trailers you would have for purchase (new or used). Minimum specifications listed below.

We are looking at the possibility of purchasing 25 trailers. If you can let me know the pricing (and any discounts, that we may receive) and pictures so we can see what will best suit the needs of our individuals.

The trailers will need to have the following specs in order to be considered:

- Minimum specifications:
  - 19 ft or greater in length
  - Minimum 40 gal Fresh water capacity
  - Minimum 20 gal grey and black water capacity
  - Queen size bed (60x80) or larger
  - Electric/water/sewer hookups
  - AC
  - Gas Heat (Propane)
  - Shower
  - lavatory
  - Refrigerator – 6 cu ft or greater
  - Cook top burners minimum 2
  - Microwave
  - Stove
  - Carbon Monoxide detectors
  - Fire Extinguishers
  - Television (smart TV is preferred)

The trailers must be available to the City by April 17th.

We are looking for the most reasonable cost to the City for procuring all the trailers. We need to have a response no later than Monday at noon.

Please let me know if you have any questions.

Thank you,
Tammi
Char Tim

From: Tammi Leatham
Sent: Friday, April 3, 2020 3:09 PM
To: Tammi Leatham
Subject: FW: City of Boise ~ camping trailers
Importance: High

Good afternoon ~ (part II) •
Please also let us know what warranties are offered for new and used trailers as well.

Thank you,
Tammi

From: Tammi Leatham
Sent: Friday, April 3, 2020 2:52 PM
To: Tammi Leatham <TLeatham@cityofboise.org>
Subject: City of Boise ~ camping trailers
Importance: High

Good afternoon,

The City of Boise is preparing to secure accommodations for Water Renewal and Utility Maintenance Staff in the event we need a group to shelter in place during this pandemic. In the event the situation warrants us to shelter staff in place in order ensure operations of the facilities, we would like the staff doing so to have reasonable accommodations.

Can you please supply me with a list of trailers you would have for purchase (new or used). Minimum specifications listed below.
We are looking at the possibility of purchasing 25 trailers.
If you can let me know the pricing (and any discounts, that we may receive) and pictures so we can see what will best suit the needs of our individuals.

The trailers will need to have the following specs in order to be considered:
Minimum specifications:
19 ft or greater in length
Minimum 40 gal Fresh water capacity
Minimum 20 gal grey and black water capacity
Queen size bed (60x80) or larger
Electric/water/sewer hookups
AC
Gas Heat (Propane)
Shower
lavatory
Refrigerator – 6 cu ft or greater
Cook top burners minimum 2
Microwave
Stove
Carbon Monoxide detectors
Fire Extinguishers
Television (smart TV is preferred)
The trailers must be available to the City by April 17th.

We are looking for the most reasonable cost to the City for procuring all the trailers. We need to have a response no later than Monday at noon.

Please let me know if you have any questions.

Thank you,
Tammi

Tammi Leatham
Purchasing Specialist
Department of Finance and Administration
Office: (208)608-7158
tleatham@cityofboise.org

Making Boise the most livable city in the country.
Good Afternoon,

Since the City is uncertain of the timeframe that we would need to purchase the trailers you have proposed. Therefore, we would like to inquire if we could include a condition in the purchase agreement in which the City would include a retainage in return for the dealer to honor the agreed upon price and deliver the units within 48 hours to the site upon request by the City. If the City does not request delivery of the trailers the dealer will be entitled to the retainage and the City will have no obligation to purchase the trailers.

Please let me know if this will be acceptable.

Thank you,
Tammi
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TO: Mayor and Council
FROM: Karla Nelson, Planning and Development Services
NUMBER: ORD-13-20
DATE: March 30, 2020
SUBJECT: CAR15-00029 / Ordinance

BACKGROUND:

On October 3, 2016, Planning & Zoning Commission recommended approval.

On November 29, 2016, City Council approved.

On January 31, 2017, City Council adopted the zoning amendment, ORD-1-17.

FINANCIAL IMPACT:

None

ATTACHMENTS:

- Ordinance_CAR15-00029_Exhibit B - Ordinance Summary (DOCX)
- Ordinance_CAR15-00029_Syringa Valley-Specific Plan (PDF)
- Ordinance_CAR15-00029_SP03 (PDF)
CITY OF BOISE

Ordinance NO. ORD-13-20

BY THE COUNCIL

BAGEANT, CLEGG, HALLYBURTON, SANCHEZ, THOMSON AND WOODINGS

AN ORDINANCE (CAR15-00029 / COREY BARTON HOMES, INC.) ENACTING TITLE 11, CHAPTER 13, SECTION 3 OF THE BOISE CITY CODE TO CODIFY THE SYRINGA VALLEY SPECIFIC PLAN DISTRICT (SP-03) PROVISIONS PREVIOUSLY APPROVED BY BOISE CITY COUNCIL; ADOPTING THE SYRINGA VALLEY SPECIFIC PLAN APPROVED AS PART OF CAR15-00029; AMENDING TITLE 11, CHAPTER 5, TABLE 11-05.1 TO ADD REFERENCE TO SYRINGA VALLEY SPECIFIC PLAN DISTRICT; APPROVING AN ORDINANCE SUMMARY; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the Boise City Council has previously approved the Syringa Valley Specific Plan, the creation of the Syringa Valley Specific Plan District, and the rezone from A-2 (Open Land) to SP-03 (Syringa Valley Specific Plan) for the property located in the district, as part of CAR15-00029 and pursuant to Boise City Code Section 11-05-08; and

WHEREAS, Blueprint Boise will be amended by resolution to update references accordingly.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF BOISE CITY, IDAHO:

Section 1. That Title 11, Chapter 13, Section 3 of the Boise City Code be hereby enacted to read as follows:

11-013-03 Syringa Valley
11-013-03 SYRINGA VALLEY

1. APPLICABILITY OF ORDINANCE

This Syringa Valley Specific Plan Zoning Ordinance applies to all property designated on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-013.9 below) in lieu of Chapter 11-04, Zoning Districts, except where noted herein. All remaining chapters of this Code still apply, except where noted herein. If any provision of this section conflicts with any provision of the Code, the provisions of this section shall control.

2. INTERPRETATION OF DISTRICTS

A. Sub-Districts Established

(1) Low-Density Residential (LR)
(2) Medium-Density Residential (MR)
(3) Village Center (VC)
(4) Commercial/Business Campus (CB)
(5) Industrial (IND)

B. District Boundaries
The location and boundaries of the Syringa Valley Specific Plan (SP-03) District are shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-013.9 below). The location and boundaries of the Syringa Valley Specific Plan Sub-Districts established herein are shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-013.9 below). Where any uncertainty exists as to the boundary of any such district, the following rules shall apply:

(1) Where any such boundary line is indicated as following a street, alley or public way, it shall be construed as following the centerline thereof.
(2) Where a boundary line is indicated as approximately following a lot line, such lot line shall be construed to be such boundary line.
(3) Where a boundary line divides a lot or crosses unsubdivided property, the location of such boundary shall be as indicated upon the Syringa Valley Zoning Map.

3. CONFORMITY REQUIRED
A. General
Except as otherwise provided herein, all land, buildings and premises in any Sub-District established herein shall be used only in accordance with the regulations established herein for that district. Additionally, no property shall be allowed to maintain an unattractive appearance or public nuisance as defined by this Code and/or state code at any time.

B. Purpose of the Low-Density Residential (LR) Sub-District
The purpose of the LR Sub-District is to provide for the development of diverse urban housing products at a density of ranging from 2 to 6 units per gross acre. The LR Sub-District north of W. Lake Hazel Rd. will have a maximum density of 4.5 units per gross acre, and south of W. Lake Hazel Rd. the overall density cannot exceed 6 units per gross acre. This Sub-District may include a variety of lot sizes. A variety of housing types may be included within a development, including attached units (townhouses, duplexes), detached units (patio homes single-family) and multi-family units, regardless of the district classification of the site, provided that the overall gross density is not exceeded as outlined above. Accessory dwelling units and uses are also allowed, along with community uses such as parks, community centers and recreational facilities.

C. Purpose of the Medium-Density (MR) Sub-District
The purpose of the MR Sub-District is to (a) accommodate medium-density residential uses at a density of 10-20 units per gross acre; (b) provide an orderly transition from more intensive, higher density uses to less intensive, lower density uses; and (c) allow limited cottages and quasi-residential uses, including senior
housing and care facilities. The MR Sub-District includes flexibility in lot sizes and restrictions, and anticipates residential uses ranging from row houses and townhouses to condominiums and multi-story apartments. A range of civic and recreational facilities is allowed, along with office, medical and personal service commercial uses that are ancillary to senior housing and care facilities.

D. Purpose of the Village Center (VC) Sub-District
The purpose of the VC Sub-District is to provide a location for mixed-use, pedestrian-oriented development featuring retail, offices and restaurants in conjunction with residential uses. Residential uses will include a mix of housing types with densities up to 18 units per acre on a net parcel basis.

E. Purpose of the Commercial/Business Campus (CB) Sub-District
The purpose of the CB Sub-District is to accommodate business and professional office uses, and neighborhood and regional serving commercial uses such as large and small retailers, hotels, restaurants, and theaters together with necessary off-street parking facilities. Large office buildings are allowed in this area, along with service, lodging, and civic uses. The CB Sub-District will emphasize high quality design, pedestrian orientation, and flexible development standards.

F. Purpose of the Industrial (IND) Sub-District
The purpose of the IND Sub-District is to provide for a convenient employment center for manufacturing, research and development, warehousing, and distributing. The IND Sub-District is intended to encourage the development of industrial uses that are clean, quiet and free of hazardous or objectionable elements and that are operated, entirely, or almost entirely, within enclosed structures.

G. Residential District Standards
The following standards apply to the LR Sub-District and the MR Sub-District

1. Minimum Property Size
   (a) Each property shall be of sufficient size to meet the minimum setbacks as established in this section.
   (b) Minimum property size shall be determined exclusive of land that is used for the conveyance of irrigation water and drainage, unless (a) the water is conveyed through pipe or tile; and (b) included as part of a utility easement that generally runs along the property lines.

2. Minimum Street Frontage
   (a) Properties with street frontages on a curve or at approximately a 90-degree angle shall be a minimum of 30 feet wide measured as a chord measurement.
   (b) Street frontage for 2 properties sharing a common drive shall be a minimum of 15 feet for each property.
(c) Street frontage for flag properties that do not share a common drive shall be a minimum of 30 feet wide.

H. Allowed Uses

Table 11-013.8 sets forth the allowed uses in each Sub-District established herein. Uses allowed by right are designated with an “A”, uses allowed by right, subject to administrative review are designated with an “A*”, and uses allowed with design review approval are designated with a “D”. Uses listed but not designated as allowed in Table 11-013.9 are prohibited. Uses not listed in Table 11-013.9 are allowed only upon a determination by the Planning Director that such uses are similar or compatible in nature to the allowed uses in Table 11-013.9. Any affected person may appeal such a determination of the Planning Director to the Planning and Zoning Commission within 10 calendar days following the date the decision is mailed in accordance with Chapter 11-03, Review and Decision Procedures.

**TABLE 11-013.9: Uses Allowed in Sub-Districts**

| SP-03-LR | SP-03-MR | SP-03-VC | SP-03-CB | SP-03-IND |
### TABLE 11-013.9: Uses Allowed in Sub-Districts

<table>
<thead>
<tr>
<th></th>
<th>SP-03-LR</th>
<th>SP-03-MR</th>
<th>SP-03-VC</th>
<th>SP-03-CB</th>
<th>SP-03-IND</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESIDENTIAL</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Apartment or Multiple Family Dwelling</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td></td>
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</tr>
<tr>
<td>Row House (Townhouse)</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplex House</td>
<td>A</td>
<td>A</td>
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<td></td>
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<tr>
<td>Single Family Residence or Cottage</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
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<tr>
<td>Condominiums</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Occupation</td>
<td>A*</td>
<td>A*</td>
<td>A*</td>
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<tr>
<td>Continuing Care Retirement Community</td>
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<tr>
<td>Assisted Living Apartment</td>
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<td></td>
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<tr>
<td>Skilled Nursing Care Facility</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Memory Care Facility</td>
<td>D</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Accessory Dwelling Unit</td>
<td>A*</td>
<td>A*</td>
<td>A*</td>
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<td></td>
</tr>
<tr>
<td>Accessory Use</td>
<td>A*</td>
<td>A*</td>
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<tr>
<td><strong>LODGING</strong></td>
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<tr>
<td>Hotel (no room limit)</td>
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<td></td>
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</tr>
<tr>
<td>Hotel (up to 12 rooms)</td>
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<tr>
<td>Inn (up to 5 rooms)</td>
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<td>Motel</td>
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<tr>
<td><strong>OFFICE/RETAIL</strong></td>
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<tr>
<td>Office - Business, Professional, Medical</td>
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<td>D</td>
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<tr>
<td>Retail Store (convenience, clothing, video rental, sundries, pharmacy etc.)</td>
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<td>D</td>
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</tr>
<tr>
<td>Personal Service Store (dry cleaning, Laundromat, barber shop, etc.)</td>
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<td>D</td>
<td>D</td>
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</tr>
<tr>
<td>Service Station</td>
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<td>Automobile Service</td>
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<td>Lot, Automobile Sales</td>
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<td>Drive-Up Window</td>
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<td>Billboard</td>
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<tr>
<td>Shopping Center: Neighborhood or Community or Regional Commercial</td>
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<tr>
<td>Car Wash</td>
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<tr>
<td>Grocery (up to 60,000 square feet)</td>
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<td></td>
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<tr>
<td>Bank</td>
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<tr>
<td>Building Materials Supply</td>
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</tr>
<tr>
<td>Wholesale Business</td>
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<td>D</td>
</tr>
<tr>
<td>Restaurant, Café, Coffee Shop</td>
<td>D</td>
<td>D</td>
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</table>
## TABLE 11-013.9: Uses Allowed in Sub-Districts

<table>
<thead>
<tr>
<th></th>
<th>SP-03-LR</th>
<th>SP-03-MR</th>
<th>SP-03-VC</th>
<th>SP-03-CB</th>
<th>SP-03-IND</th>
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<tr>
<td>Tavern, Lounge</td>
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<td>Liquor Store</td>
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<td>Temporary Sales Offices</td>
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<td>Model Homes or Units</td>
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<tr>
<td>Health Club Facility</td>
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<tr>
<td>Spa/Resort</td>
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<tr>
<td>Nursery (retail or greenhouse)</td>
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<tr>
<td><strong>CIVIC (PUBLIC AND PRIVATE)</strong></td>
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<tr>
<td>Bus Shelter</td>
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<td>Fountain or Public Art</td>
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<td>Library</td>
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<tr>
<td>Theater</td>
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<tr>
<td>Outdoor Auditorium</td>
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<td>Park</td>
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<td>Playground</td>
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<td>Parking Lot - paid</td>
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<td>Parking Structure</td>
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<td>Conference Center</td>
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<td>Religious Institution</td>
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<td>Clubs, Lodges, Social Halls</td>
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<td>Private Open Space</td>
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<td>Recreation Center</td>
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<tr>
<td>Outdoor Recreation Facility</td>
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<td>Swimming Pool</td>
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<tr>
<td>Golf Course</td>
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<td>Golf Driving Range</td>
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<td><strong>CIVIL SUPPORT</strong></td>
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<td>Fire Station</td>
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<td>Funeral Home</td>
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<td>Hospital</td>
<td>D</td>
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<tr>
<td>Medical Clinic (accessory use only in MR and CB)</td>
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<td>Rehabilitation Clinic</td>
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<td>Hospital, Large Animal or Small Animal</td>
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<td><strong>EDUCATION</strong></td>
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<td>School (public, private or parochial)</td>
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<td>School, Trade or Vocational</td>
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<td>Family Child Care Home (1-6 children)</td>
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<tr>
<td>Group Child Care (7-12 children)</td>
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<tr>
<td>Intermediate or Large Child Care Center (13+ children)</td>
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<tr>
<td><strong>INDUSTRIAL</strong></td>
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<tr>
<td>Heavy Industrial Facility</td>
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<td>Light Industrial Facility</td>
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<td>Agriculture</td>
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### TABLE 11-013.9: Uses Allowed in Sub-Districts

<table>
<thead>
<tr>
<th></th>
<th>SP-03-LR</th>
<th>SP-03-MR</th>
<th>SP-03-VC</th>
<th>SP-03-CB</th>
<th>SP-03-IND</th>
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<td>Laboratory</td>
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<tr>
<td>Public Utility Facility – Minor</td>
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<td>D</td>
<td>D</td>
<td>D</td>
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<tr>
<td>Public Utility Facility – Major</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
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<tr>
<td>Wireless Communication Facility or Micro-Cell</td>
<td>A&lt;sup&gt;a&lt;/sup&gt;</td>
<td>A&lt;sup&gt;a&lt;/sup&gt;</td>
<td>A&lt;sup&gt;a&lt;/sup&gt;</td>
<td>A&lt;sup&gt;a&lt;/sup&gt;</td>
<td>A&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>Mini-Storage</td>
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<td>Warehouse</td>
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<td>Manufacturing Facility</td>
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<td>Power Production Facility</td>
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<tr>
<td>Broadcasting Facility (e.g. TV, radio) or Micro-Cell</td>
<td></td>
<td></td>
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</table>

### I. Lot and Structure Dimensions

Table 11-013.10 sets forth the lot, yard, density and structure height requirements for uses within each Sub-District established herein.

### TABLE 11-013.10: Lot and Structure Dimensions in Sub-Districts

<table>
<thead>
<tr>
<th></th>
<th>SP-03-LR</th>
<th>SP-03 MR&lt;sup&gt;1&lt;/sup&gt;</th>
<th>SP-03-VC</th>
<th>SP-03-CB</th>
<th>SP-03-IND</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. MAXIMUM DWELLING UNITS PER ACRE</strong></td>
<td>6</td>
<td>20</td>
<td>18</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Attached Detached Attached Detached Attached</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>b. MIN. LOT AREA (sq. ft.)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Corner Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>c. MIN. AVG. LOT WIDTH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Corner Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>d. MIN. STREET FRONTAGE (flag lot)</strong></td>
<td>10/20&lt;sup&gt;2&lt;/sup&gt;</td>
<td>10/20&lt;sup&gt;2&lt;/sup&gt;</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>e. MIN. BUILDING SETBACKS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Yard &amp; Side Yard Abutting Public St.&lt;sup&gt;3&lt;/sup&gt;</td>
<td>10&lt;sup&gt;4&lt;/sup&gt;</td>
<td>10&lt;sup&gt;4&lt;/sup&gt;</td>
<td>10&lt;sup&gt;4&lt;/sup&gt;</td>
<td>10&lt;sup&gt;4&lt;/sup&gt;</td>
<td>10&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Abutting public park</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Rear Yard</td>
<td>15&lt;sup&gt;5&lt;/sup&gt;</td>
<td>15&lt;sup&gt;5&lt;/sup&gt;</td>
<td>15&lt;sup&gt;5&lt;/sup&gt;</td>
<td>15&lt;sup&gt;5&lt;/sup&gt;</td>
<td>0/15&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Side Yard – Interior</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0/5&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>f. MIN. PARKING LOT/SERVICE DR SETBACKS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Yard &amp; Side Yard – Adj. to St.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rear Yard &amp; Side Yard – Interior</td>
<td>15</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Rear Yard &amp; Side Yard – Interior</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
J. Property Development Standards
Except as follows, the Property Development Standards for the Sub-Districts established herein shall be the same as those set forth in the Section 11-04-03 for residential uses and Sections 11-04-04 and 11-04-05 for office and commercial uses:

1. For attached single-family units, the minimum frontage requirement in Section 11-04-03 is reduced to 18 feet.
2. For lots with 0 feet frontage on a public right-of-way, drive aisles will provide access to the public street with perpetual ingress/egress or cross access easements recorded against the property. An owner’s association or other agreed upon arrangement among the affected property owners will maintain the drive aisles in accordance with a recorded declaration or other agreements. The easements and declaration must be reviewed by the Boise City Attorney’s office at the time of preliminary plat approval to ensure the access and maintenance obligations of this paragraph are addressed. The Ada County Highway District must approve installation of any required street signs. Buildings will be addressed to the public street from which the drive aisles extend. Addresses will be clearly delineated with appropriate monuments or signs.
3. Off-street parking and loading facilities shall be provided in accordance with Section 4 below.
4. The maximum number of residential units allowed within the Syringa Valley Specific Plan District is 2,500. To exceed this limit, the Syringa Valley Specific Plan Applicant must follow the rezone procedures of the Boise City Code to amend the Syringa Valley Zoning Ordinance. In so doing, the Applicant need not amend the entire Syringa Valley Specific Plan so long as the City finds that the revised limits are generally in accordance with the Syringa Valley Specific Plan.

K. Design Review

1. Applicability: Any of the uses listed as requiring Design Review, and any visible exterior improvements to a site, building or structure for any such use (including new facilities, remodeling, rehabilitation projects and expansion projects) within the Syringa Valley District shall require submittal of a Design Review Application and fee in accordance with Section 11-03-04.12 of the Boise Development Code, except where expressly modified herein.
2. Application Content: Any application to the City shall comply with Section 11-03-04.12 of the Boise City Code.
3. Level of Review: The Planning Director shall determine whether an application shall be processed at the administrative level or by the Design Review Committee (“Committee”) level; provided, however, all applications for projects that have less than 5,000 square feet of gross building area and less than 20,000 square feet of site improvements shall be administratively reviewed by the Planning Director.
4. Review and Findings: The Planning Director or Committee, as appropriate, shall review the application to determine whether the
proposed application complies with the design review objectives, considerations and guidelines set forth in Sections 11-07-02 through 11-07-06 of the Boise City Code and the design criteria for the Syringa Valley District as set forth in the Syringa Valley Specific Plan. In the event of a conflict between such sections of the Boise City Code and design standards set forth in the Syringa Valley Specific Plan, the provisions of the Syringa Valley Specific Plan shall govern. Upon making such determination, the Planning Director or Committee shall issue its findings of fact, conclusions of law and conditions of approval. Any action of the Planning Director or the Committee may be appealed pursuant to Section 11-03-03.9 of the Boise City Code.

4. OFF-STREET PARKING AND LOADING REQUIREMENTS

In the LR, MR, VC, and CB Sub-Districts, off-street parking and loading facilities shall be provided in accordance with Section 11-07-03 of the Boise Development Code, except as noted herein. In the VC and CB Sub-Districts, off-street parking and loading facilities shall be provided in accordance with the Pedestrian Commercial Zoning District parking requirements in Section 11-07-06.2., except as noted herein. In lieu of the off-street parking ratio requirements in Sections 11-07-03 and 11-07-06.6.2, non-residential uses in the MR, VC, and CB Sub-Districts must meet an overall parking density of 3.5 per 1000 square feet. Assisted living apartments, independent living residences within the Continuing Care Retirement Community, and similar uses shall be subject to the off-street parking requirements for “Housing for Elderly” uses listed in Section 11-07-03. Memory care facilities, skilled nursing care facilities, and similar uses shall be subject to the off-street parking requirements for “Nursing Home” uses listed in Section 11-07-03.

5. ADMINISTRATIVE PROVISIONS

A. Plat Approval Criteria
Development within the Syringa Valley Specific Plan District shall be subject to the subdivision and other related provisions of the Boise City Code, except that a neighborhood meeting shall not be required unless that plat proposes more than 240 dwelling units. Additionally, the City Council must find that each preliminary plat proposed and/or amended within the Syringa Valley Specific Plan District substantially conforms to the adopted Syringa Valley Specific Plan and complies with all applicable provisions of the Syringa Valley Specific Plan Zoning Ordinance. Plats must still proceed through the normal hearing process with review by the Planning and Zoning Commission and City Council.

B. Annexation into SP-03 Syringa Valley Specific Plan District
Any property owner or authorized representative may seek to reclassify their property for inclusion within the Syringa Valley Specific Plan District pursuant to Section 11-05-08 of the Boise Development Code.

C. Amendments
Any property owner within the Syringa Valley Specific Plan District may seek to amend the Syringa Valley Specific Plan Zoning Ordinance or the Syringa Valley Specific Plan pursuant to the Boise City Code provisions for zoning amendments.

D. Exceptions
(1) The Planning Director may grant exceptions to any setback, frontage, parking or height restriction up to 20 percent of the applicable limit and may grant exceptions to any use restrictions on a case by case basis.

(2) The Planning and Zoning Commission may grant exceptions to any setback, frontage, parking or height restriction greater than 20 percent of the applicable limit.

(3) Any approval pursuant to this section shall be supported by each of the following findings:

(a) The exception is consistent with the Syringa Valley Specific Plan; and

(b) The exception is justified based on unique circumstances of the proposed use or exceptional design features or the shape of the land.

(c) The exception would not cause undue adverse impacts on any other property.

(d) For any approval pursuant to subparagraph b, the exception meets the general conditional use criteria in the Boise Development Code.

(4) Applications pursuant to this section shall include such information as the Planning Director determines is necessary to make the applicable findings in subparagraph c. Applications shall be processed in accordance with the procedures established in the Syringa Valley Specific Plan for Design Review.

(5) The decision on any requested exception may be appealed pursuant to the appeal provisions of the Boise City Code.

E. Periodic Review
The Planning Director may perform a review of the implementation of the Syringa Valley Specific Plan not more frequently than every 1 year after approval of the first final plat. The review may address any matters the Planning Director deems appropriate regarding the progress of the development. Any modification of the Syringa Valley Specific Plan Zoning Ordinance may only occur after review by the Syringa Valley Specific Plan Applicant and the Planning Director and in compliance with the applicable Boise City Code sections for zoning amendments and Idaho Code Section 67-6511(d).

6. DEFINITIONS
The following definitions apply to this Section. If any conflict exists with definitions in other parts of the Code, the following definitions control.

A. Syringa Valley Specific Plan Zoning Ordinance
Section 0 of the Boise City Code or successor section specifically setting forth zoning regulations for the Syringa Valley Specific Plan District.

B. Syringa Valley Specific Plan
The Specific Plan adopted for the Syringa Valley Specific Plan District by the City of Boise on November 29, 2016, as maintained in the official records of the City, including subsequent modifications.

C. Syringa Valley Specific Plan Applicant
Corey Barton Homes, Inc. d/b/a CBH Homes, or successor entities.

**D. Syringa Valley Specific Plan District**
The area designated as the SP-03 zone or successor designation on the City of Boise’s zoning map and as shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (attached as Figure 11-013.9).

**E. Boise City Code**
The code of the City of Boise. If the Boise City Code is amended, any reference to the Boise City Code in this Ordinance shall be deemed to refer to the applicable amended provision.

**F. Gross Acres**
For the purposes of calculating residential density (units per gross acre), gross acres shall be defined as the total area in the LR, MR and VC Sub-Districts less the area included in the rights of way for S. Cole Rd., W. Lake Hazel Rd., and S. Orchard St.; less the area of the New York Canal easement; less the area of the Kirsten Coughlin City park; and less the area of the public elementary school.

**G. Continuing Care Retirement Community**
A campus-style facility (multiple buildings on a single lot) that provides housing, personal services and health care, including nursing home care to people of retirement age. The community must provide a continuum of care to meet the needs of the individual residents, from independent living to assisted living to skilled nursing care and, possibly, memory care support. Meals, housekeeping, linens, 24-hour security and recreational services usually are provided. Each individual resident enters into a contract with the retirement community that defines the type of housing and services to be provided and the fees that will be charged.

**H. Memory Care Facility**
Same as Skilled Nursing Facility except the residents also receive care for some form of memory impairment.

**I. Skilled Nursing Facility**
A residential facility that provides 24-hour supervision by licensed nurses. The care usually is prescribed by a physician. Emphasis is on medical care, supplemented by physical, occupational, speech and other types of therapies. Personal care services, such as help with meals, bathing, dressing and grooming are also provided along with social services, religious services and recreational activities. A nursing facility offers care for individuals suffering from chronic diseases or conditions that do not require the constant attention of physicians. Services are provided that address the individuals' personal care and social-emotional needs.
Section 2. That Title 11, Chapter 5, Table 11-05.1 of the Boise City Code shall be amended to read as follows:

...
Section 3. That the Syringa Valley Specific Plan, attached and incorporated herein, is hereby adopted.

Section 4. That the summary of this ordinance, attached hereto as Exhibit “B”, is approved as to form and content.

Section 5: That following passage, approval, and publication, this ordinance may be visually reformatted administratively in order to ensure a consistent and correct appearance.

Section 6. That this ordinance shall be in full force and effect from and after its passage, approval, and publication.

### Table 11-05.1: Overlay and Specific Plan Districts

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>District Name</th>
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<tbody>
<tr>
<td><strong>Conservation Overlay Districts</strong></td>
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<tr>
<td></td>
<td>Hyde Park Conservation District</td>
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<tr>
<td></td>
<td>Near North End Conservation District</td>
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<tr>
<td><strong>Design Overlay Districts</strong></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Design Review Overlay District</td>
</tr>
<tr>
<td>HD</td>
<td>Historic Design Review Overlay District</td>
</tr>
<tr>
<td>DD</td>
<td>Downtown Design Review Overlay District</td>
</tr>
<tr>
<td>C</td>
<td>Capitol Boulevard Special Design District</td>
</tr>
<tr>
<td>EF</td>
<td>East Fairview Overlay District</td>
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<td><strong>Neighborhood Overlay Districts</strong></td>
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<tr>
<td>BSN</td>
<td>Big Sky Neighborhood District</td>
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<tr>
<td>S</td>
<td>Sycamore Neighborhood District</td>
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<tr>
<td><strong>Parking Reduction Overlay Districts</strong></td>
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<tr>
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<td>Central Downtown Parking District</td>
</tr>
<tr>
<td>P-2</td>
<td>River-Myrtle Parking District</td>
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<tr>
<td>P-3</td>
<td>South Downtown Parking District</td>
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<td><strong>Waterways Overlay Districts</strong></td>
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<tr>
<td></td>
<td>Boise River System Overlay District</td>
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<tr>
<td></td>
<td>Flood Protection Overlay District</td>
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<tr>
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<tr>
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<td>Harris Ranch Specific Plan District</td>
</tr>
<tr>
<td>SP-2</td>
<td>Barber Valley Specific Plan District</td>
</tr>
<tr>
<td>SP-3</td>
<td>Syringa Valley Specific Plan District</td>
</tr>
</tbody>
</table>

...
EXHIBIT “B”

STATEMENT OF BOISE CITY ATTORNEY
AS TO ADEQUACY OF SUMMARY
OF ORDINANCE NO. ORD-XX-20

The undersigned, James Smith, in his capacity as Deputy City Attorney of the city of Boise City, Idaho, hereby certifies that he is a legal advisor of the City and has reviewed a copy of the attached Summary of Ordinance No. ORD-XX-20 of the City of Boise City, Idaho, and has found the same to be true and complete and provides adequate notice to the public pursuant to Idaho Code Section 50-901A(3).

DATED this ___th day of ____________, 2020.

[Signature]

James Smith
Deputy City Attorney

SUMMARY OF ORDINANCE NO. ORD-XX-20
OF THE CITY OF BOISE CITY, IDAHO

PUBLIC NOTICE IS HEREBY GIVEN that the city of Boise City, Idaho, adopted at its regular meeting of ____________, 2020 that Ordinance No. ORD-XX-20 entitled: <TITLE>.

This ordinance enacts a new section to Title 11, Chapter 13 of the Boise City Code to codify the Syringa Valley Specific Plan District (SP-03) ordinance provisions previously approved by the Boise City Council as part of the Syringa Valley Specific Plan. The ordinance also adopts the Specific Plan as approved by Boise City Council. The ordinance provides general provisions for the district, as well as provisions for each sub-district within the Specific Plan. The ordinance provides for the administration of the district and for processes for administrative reviews, compliance with City procedures and standards, the City’s subdivision process and creates a design review process and standards. The ordinance provides for dimensional standards and for general and specific use standards within the district including land use requirements. The ordinance incorporates by reference all aspects of the Specific Plan. The ordinance also amends Table 11-05.1 to add reference to this Specific Plan.

The effective date of the ordinance is the date of its passage, approval and publication, and the ordinance approves this ordinance summary. A copy of the full text of the ordinance is available at the City Clerk’s office, 150 North Capitol Boulevard, in Boise, Idaho 83701. Examination may be requested in writing or in person during regular business hours of the City Clerk’s office, from 8:00 a.m. until 5:00 p.m. pursuant to Section 50-901A(4), Idaho Code.
DATED this ___th day of __________, 2020.

City of Boise City, Idaho

ATTEST:

__________________________________________
MAYOR
Lauren McLean

__________________________________________
EX-OFFICIO CITY CLERK
Lynda Lowry
SYRINGA VALLEY SPECIFIC PLAN (SP-03)
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17. Kirsten Subdivision
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SYRINGA VALLEY SPECIFIC PLAN
Project Design Team Members

OWNER/APPLICANT:
CBH Homes

PLANNING:
Taunton Group, LLC

CIVIL ENGINEERS:
Bailey Engineering, Inc.

ARCHITECTURE:
McKibben + Cooper Architects

LANDSCAPE ARCHITECTURE:
Jensen Belts Associates

WATER ENGINEERS:
SPF Water Engineering

TRAFFIC/TRANSPORTATION:
Kittelson & Associates, Inc.
1. Introduction

Corey Barton Homes, d/b/a CBH Homes (CBH) seeks the City of Boise’s approval of a new Specific Plan Ordinance to be added to Chapter 11-013 of the Boise City Code. This new Ordinance will cover land that CBH controls in the Southwest Boise Reserve Planned Community Area. The Specific Plan Ordinance, authorized by Boise City Code Chapter 11-05-08, provides a means for creating new zoning regulations for unique areas and developments, such as mixed use districts and planned developments, where conventional zoning mechanisms are inadequate.

The Syringa Valley development proposed in this application will implement the City of Boise Comprehensive Plan policies for Southwest Boise’s Reserve Planned Community. The Comprehensive Plan describes the Reserve Planned Community as generally bounded by the New York Canal (NY Canal) and S. Cole Rd. on the west, extension of S. Orchard St. on the east, the extension of W. Latigo Dr. on the north, and W. Columbia Rd. on the south. The Syringa Valley Specific Plan will cover 551.32 acres of this Reserve Planned Community Area.

Both the Syringa Valley Specific Plan and Reserve Planned Community center on the extension of W. Lake Hazel Rd. from S. Cole Rd. over the NY Canal to the extension of S. Orchard St.

The Reserve is intended to establish a mixed-use development with a range of residential housing types and densities, neighborhood commercial centers and a business campus. The Reserve is split into two Specific Plan areas, Lake Hazel North and Lake Hazel South.

The Syringa Valley Specific Plan will guide the development over several decades for the planned community. The plan will implement the proposed Syringa Valley Ordinance (SP-03). The Specific Plan narrative also describes how the Syringa Valley development will address the required and optional elements that are outlined in Chapter 11-05-08: Specific Plan Districts of the Boise Code.

The Syringa Valley property was annexed to the City of Boise in 2007 and was zoned A-2 as a holding zone until a development plan was adopted. The property was given a land use designation of Planned Community on the Blueprint Boise Future Land Use Map and many specific policies applicable to the property were included in the Blueprint Boise Southwest Planning Area.
Three Syringa Valley applications were submitted in September 2015 and requested:

1. CPA15-00008 - Amendment of the Blueprint Boise Comprehensive Plan text related to the proposed residential development north of W. Lake Hazel Rd. to increase the gross density from 3 units/acre to 4.5 units/acre and increase the residential area from 65 acres to 100 acres (Also refer to the text amendment modification submitted August 29, 2016 deleting the restriction on regional serving commercial uses)

2. CAR15-00029 - Rezoning of the property from A-2 (Open Land, Reserve) to SP-03 (Syringa Valley Specific Plan), including a number of sub-districts with a range of allowable uses and dimensional standards

3. SUB15-00055 - Approval of the Kirsten Subdivision Preliminary Plat comprised of 422 buildable lots of various sizes and 20 common lots on approximately 101 acres in the Proposed SP-03 Zone

A public hearing on the applications was held before the Boise Planning and Zoning Commission on February 8, 2016. The Commission recommended that Boise City Council approve the Comprehensive Plan text amendment, the rezoning to Specific Plan with conditions, but deny the Kirsten Preliminary Plat primarily due to transportation impacts on S. Cole Rd.

At the City Council meeting on March 29, 2016 Council did not open the public hearing and directed staff to schedule a series of work sessions with the applicant and Council.

Prior to the work sessions CBH, who had purchased the property from the original applicant, Pleasant Valley South, LLC, in late December 2015, engaged a new planning team. Four work sessions were held on May 17, June 7, June 23, and July 19. The work sessions provided the opportunity for Council members to ask questions of the applicant’s planning team and for the planning team to respond to those questions and to provide additional material to address more completely the Specific Plan required and optional elements.

At the conclusion of the 4th work session, Council directed that the existing applications, including the new and expanded material, be re-heard at a Planning and Zoning Commission public hearing prior to a City Council public hearing. Council also directed that an additional advertised neighborhood meeting be held prior to the Commission meeting. A neighborhood meeting was properly noticed and held on August 23rd at 7:00 pm at the Lake Hazel Branch Library at 10489 W. Lake Hazel Rd. The sign-in sheets were delivered to staff indicating 22 people attended.

The following document represents a re-formatting of the original narrative portion of the application to more closely align with the Specific Plan element chapters, and includes the expanded and new planning and development information presented at the Council work sessions. Also included is a revised Syringa Valley SP-03 Zoning Ordinance.
2. Current Conditions

a. Location, Ownership and Existing Uses

The Syringa Valley planned community is located on S. Cole Rd. at W. Lake Hazel Rd. in the City of Boise. The north boundary is the alignment of W. Latigo Dr. extended and the south boundary aligns with W. Columbia Rd. The future extension of a re-aligned S. Orchard St. is the east boundary, and S. Cole Rd. and the NY Canal represent the west boundary. The property is under CBH ownership. A 50-acre parcel is owned by the Independent School District of Boise City (Boise School District) for future secondary schools, but is excluded from the applications and the Specific Plan.

The Syringa Valley property is currently undeveloped high desert rangeland with the exception of a 3,000 square foot residence and out buildings located on the east side of the NY Canal. The structures are located within irrigated pasture land and are accessed by a ¼-mile gravel lane that connects to S. Cole Rd. just north of the bridge crossing of NY Canal.

The dominant man-made feature on the site is the elevated NY Canal that loops east of S. Cole Rd.
b. Surrounding Uses

North, northwest and west of the site are established single family residential uses. The South Fork subdivision lies immediately to the north and is adjacent to S. Cole Rd. An additional phase of the subdivision is under site development. The Idaho Department of Lands has substantial holdings north and east of Syringa Valley. There are no current plans for the development of the State Lands. Adjacent undeveloped properties east of S. Cole Rd. within the City of Boise are mostly zoned M-1 Industrial, although an 80-acre parcel east of South Fork is zoned R1-A allowing large lot single family development.

There are additional private lands immediately east of Syringa Valley, which are undeveloped desert properties. Currently, these sites are zoned Rural Preservation (RP) allowing 1 unit per 40 acres in Ada County and are designated as Industrial in the Boise Comprehensive Plan. There is a 40 acre out parcel on the north side of Columbia Rd. alignment that is surrounded by Syringa Valley property on three sides. The parcel is designated Planned Community, but is Zoned RP in Ada County. Other private parcels south of the project are zoned Rural Residential (RR) allowing 1 unit per 10 acres, including the rural residential neighborhood along Hollilynn Dr.

West of S. Cole Rd. and north of the NY Canal are approximately 450 – 500 acres of irrigated farmland, which are anticipated to be future development properties. The properties are zoned RSW (Southwest Community Residential) in Ada County, The Boise Comprehensive Plan designates this area as Compact Neighborhood.

Between S. Cole Rd. and the NY Canal there are a small number of existing rural residential parcels also zoned RSW in Ada County.
c. Transportation and Access

Current access to the site is provided by a driveway from S. Cole Rd north of the NY Canal where the property has direct frontage on the roadway. The canal represents an access barrier to S. Cole Rd. Future access will be described under the Circulation section.

S. Cole Rd. provides direct connection to key east-west arterials and Interstate 84 north of the site. Ada County Highway District (ACHD) recently completed the extension of W. Hazel Rd. from S. Maple Grove Rd. to S. Cole Rd. that has improved east-west access in the southwest portion of Ada County.

In 2008 ACHD adopted the Lake Hazel/Gowen Road Relocation Study that included the extension of W. Lake Hazel Rd. through Syringa Valley to connect to Eisenman Rd. at the Isaac’s Canyon Interchange on Interstate 84. The study also addressed the connection from W. Lake Hazel Rd. to Gowen Rd. by a realigned S. Orchard St.

ACHD owns the ultimate right of way for the extension of W. Lake Hazel Rd. from S. Cole Rd. to S. Orchard St. and for the extension of S. Orchard St. to just south of Gowen Rd. Currently ACHD and the Boise Airport are negotiating the acquisition of Airport land by ACHD for the remaining 1,300-foot segment of the 120-foot wide right of way needed to connect to Gowen Rd. Further discussion of the W. Lake Hazel Rd.-Orchard St. extension is presented in the Conceptual Phasing section.

The Syringa Valley location is indicated by a star symbol on the following map and other regional maps in this narrative.
d. Utilities

SUEZ Water Idaho (SUEZ) is the municipal water provider for the City of Boise and the project. A 16-inch water transmission line running north on S. Cole Rd. was installed through the western portion of the property to avoid crossings of the NY Canal. The location of the water line follows the alignment of future roadways and was completed in 2016.

There is an existing sewer lift station located on S. Cole Rd. just north of the property that provides service to the South Fork community.

A 15-inch City of Boise sewer main is stubbed at W. Lake Hazel Rd. and S. Cole Rd. and will provide the sewer service for the project.

e. Water Rights

The Syringa Valley property does not possess groundwater rights with the exception of a domestic water right for the existing residence. However, the property does benefit from a surface water right delivered from the NY Canal that irrigates 26 acres east of the canal in the vicinity of the existing residence. This water right is very restrictive as the place of use cannot be modified and the right cannot be enlarged.
f. Landform and Vegetation

The property has a gently rolling gradient from a northeast to southwest direction. The high point of the property is the northeast corner at an elevation of 2,869 feet and the low point at 2,785 feet elevation is situated just east of the NY Canal near the existing residence and south of the Lake Hazel Rd. alignment. The fall across the site is approximately 84 feet. Slopes are moderate and range from 1-5%. The portion of the property north of the W. Lake Hazel Rd. alignment is generally higher than the southern portion and offers territorial views of the Ten Mile Ridge to the south.

The property lies at the boundary of the semi-arid Mountain Home Uplands Ecoregion and the irrigated Treasure Valley Ecoregion. Natural vegetation is mostly sagebrush steppe including sagebrush, crested wheatgrass, rabbit bush, cheatgrass and medusahead wildrye. Tree cover is absent from the property except for a small 3-acre grove of trees east of the canal and along the drive to the existing residence.
g. Drainage Pattern and Groundwater

Consistent with the topography of the site, the natural drainage pattern is in a northeast to southwest direction. The NY Canal is a barrier to the majority of the natural drainage due to its elevated structure. Eight-mile Creek is located south of the property and the very southern portions of the property drain to this watercourse.

A review of the well logs indicates that the depth to groundwater is a minimum of 80 feet.

h. Soils and Geology

Surficial soils are typically silty clay loam underlain by a duripan zone, which is cemented by illuvial silica into a subsurface hardpan. This layer restricts surface water infiltration. Below the duripan is fractured basalt of varying depths.

Syringa Valley Site Soils Map
i. Airport Influence Zones

The Boise Airport is located northeast of Syringa Valley and the two active runways are oriented in northwest-southeast direction. In order to protect the Airport operations from encroachment from future residential development and to minimize noise impacts, the Airport has developed a set of Airport Influence Zones that restrict or eliminate future incompatible uses.

Most of the Syringa Valley is situated in Zone A, the least restrictive zone. Zone A permits residential development and schools with sound attenuation (reduction of 25 dB). Approximately 13 acres of the property north of W. Latigo Dr. is designated Zone B where residential is not allowed. Lastly, lands in the western portion of the site, primarily south of the extension of W. Lake Hazel Rd. and west of S. Cheyenne Ave. extended, are outside the influence zones.

The north-east corner of the property is a distance of 1.5 miles from the active south runway and 2.25 miles to the current northwest tip of the partially constructed third runway.

In 2015 the Boise Airport conducted an update to the Noise Exposure Maps and Noise Compatibility Program through 2020 in accordance with FAA requirements. The study modeled...
the current commercial fleet mix operations plus the addition of F-15 aircraft with afterburners (the standard operating procedure) to provide the most conservative and realistic future noise projection for the 5-year time period. The study revealed that the Syringa Valley north boundary is located well outside of the key day-night average sound level (DNL) 65 dB contour. This noise contour is located north of Gowen Rd. with a 1-mile separation from Syringa Valley. The FAA has determined that a DNL of 65dB and higher is not compatible with residential development. The Airport has further required that residential development within the project should not extend east of S. Umatilla Ave. on the north side of W. Lake Hazel Rd. The remainder of planned residential development would be restricted to south of W. Lake Hazel Rd. Both requirements increase the noise buffer from the 65 dB contour by an additional half mile.

The Airport has requested that the entire property should be subject to an Avigation Agreement at the time of development and this requirement has been accepted by CBH. CBH will also include a disclosure of the avigation easement in future sales contracts with home buyers.

The Airport has also concluded that the project would not impact the future development of the third runway south of Gowen Rd. and that a noise study for unknown future operations of the runway would not prudent.
3. Specific Plan Elements

Chapter 11-05-08 of the Boise Code provides the purpose, scope and other requirements for the creation of Specific Plan Districts. Specific Plans are a tool to address unique areas or developments where other conventional zoning mechanism cannot achieve the desired results. Each Specific Plan District contains its own non-transferable set of regulations.

The Scope section for a Complex Specific Plan such as Syringa Valley suggests different chapters to be included in the plan, plus detailed standards for the issues addressed in each chapter. Examples of the chapters are land use, zoning standards, infrastructure, transportation, environmental considerations, phasing, and land use controls.

The Boise Code also outlines the Required and Optional Elements to be included in a Specific Plan, depending on the nature of the proposed development. Given the scale of Syringa Valley, all of the elements are required to be addressed. The Syringa Valley application submitted in 2015 partially addressed the element list and this updated and revised Specific Plan document completes the elements not addressed in the original application.

<table>
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<tr>
<th>Section</th>
<th>Elements</th>
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<th>Work Sessions</th>
<th>Updated Specific Plan Narrative</th>
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Attachment: Ordinance_CAR15-00029_Syringa Valley-Specific Plan (ORD-13-20 : CAR15-00029 / Ordinance)
4. Community Vision

a. Housing Opportunity

Syringa Valley offers a unique housing opportunity within the Boise City incorporated area and its Area of City Impact (AOCI) to create a new community. The property is one of a very few locations within the Boise AOCI where there is enough contiguous acreage under single ownership to develop a master-planned community. That opportunity was recognized when the property was annexed in 2007 and later when the Comprehensive Plan was updated in 2011 designating the property as Planned Community.

Chapter 3 of Blueprint Boise included an assessment of each of the Comprehensive Plan planning areas relative to the degree of change that would result from new development, infill development and redevelopment. Appendix C of the Comprehensive Plan presents maps that illustrate Areas of Stability and Areas of Change for each of the planning areas based on the following criteria:

**Areas of Stability**
- New or recent construction
- Established areas

**Areas of Change**
- Significant new development or redevelopment anticipated
- Some infill and redevelopment opportunities
- Reinvestment in established infrastructure needed

The most significant locations for new “greenfield” residential development included the Northwest, Southeast, Southwest, and Barber Valley Planning Areas.

The Northwest Planning Area, including the recent 592-acre City annexation offers only limited, fragmented future housing locations in a land use pattern that is already established. The Southeast Planning Area opportunity is entirely represented by the future 6,000-acre East Columbia Planned Community east of Micron and south of SH 21. While of large scale with strong transportation advantages, there are numerous ownership and regulatory challenges to master planning and developing this area. The Airport Planning Area contains the greatest potential future development land area but this planning area will be restricted to non-residential uses that are compatible with the Airport operation, future Gowen Field missions, and development of the third runway.

The Southwest Planning Area’s map contained approximately 1,700 acres of potential new residential development area. Since adoption of Blueprint Boise in 2011, several properties have developed (South Fork, Hazelwood Village, Charter Point) that have reduced the inventory
of available land. The development timing for the farmland north of the NY Canal between S. Cole Rd. and S. Maple Grove Rd. is unknown.

Given the above analysis and with Harris Ranch and Barber Valley Planning Area in East Boise rapidly building out, Syringa Valley is the foremost opportunity to meet future new home demand.

A pending issue in the Boise AOCl is the projected depletion of single family lot inventory as current and proposed projects are absorbed. The chart that follows is a forecast provided by Land Advisors Organization that illustrates the decline. Syringa Valley presents an opportunity to help correct the future inventory condition.
In 2015, all but three of the top 20 Ada County Best-Selling Communities were in Southeast Meridian, North Meridian and Eagle. The Boise communities included in the list were Harris Ranch, and Hazelwood Village and Devonshire in the Southwest Planning Area. With Syringa Valley’s large scale and strategic location, it is poised to capture a larger portion of the new home market for the City.
The year-to-date median home price in Ada County at the end of the second quarter was $304,900 according to Intermountain MLS. The median price in the SW Boise–Meridian MLS Area of $254,900, where Syringa Valley is situated, represents a competitive advantage compared to the County median price and to the MLS areas in NE Boise ($448,600), SE Meridian ($317,000), SW Meridian ($335,080), NW Meridian ($315,200), and Eagle ($413,369).

Building upon these housing opportunity factors, Syringa Valley can provide new housing desired by the marketplace at prices closer to the median for the County. This marketplace advantage would be in combination with the planned commercial, employment, institutional and recreational uses at the property. Syringa Valley also has closer proximity to the regional transportation network and regional employment centers in Boise than competing areas in north and west Ada County. This proximity offers the benefit of reducing commute times for consumers (delivering economic savings and health benefits). Without Syringa Valley many people will move to other low-density suburbs even if it means more time in a car.
b. Syringa Valley Vision

The vision for Syringa Valley is a walkable mixed-use community, thoughtfully designed, and embracing its high desert setting. Syringa Valley will be a multi-generational community offering diverse and competitively priced housing options linked together by pathways and recreation facilities to encourage physical activity and social engagement for all residents.

c. Community Development Principles

To implement the Syringa Valley vision, the following community development principles were established to guide Syringa Valley planning and design:

1. Create a healthy community that is active, walkable and connected
2. Design a Village Center for community gathering and social engagement
3. Adopt street patterns and building orientations that focus life on the street
4. Utilize open space as an organizing element in neighborhood design
5. Support education through the community plan
6. Become a model for water-wise community development
7. Offer a diversity of housing choices to match consumer incomes, preferences, and life stages
8. Include locations for community services meeting day-to-day and week-to-week needs that will encourage short auto trips and other travel modes

5. Proposed Zoning and Residential Density

With the approval of application CAR15-00029, the Syringa Valley property will be rezoned from A-2 (Open Land, Reserve) to SP-03 (Syringa Valley Specific Plan). The SP-03 zone will include a number of sub-districts that will identify a range of allowable uses and a unique set of dimensional standards applicable to each sub-district. The zoning ordinance is designed for flexibility and to encourage creativity. The proposed sub-districts are:

- Low-Density Residential (LR) Sub-District
- Medium-Density Residential (MR) Sub-District
- Village Center (VC) Sub-District
- Commercial/Business Campus (CB) Sub-District
- Industrial (IND) Sub-District

The following is a general description of the sub-districts. Refer to the Zoning Ordinance section for greater detail regarding proposed uses and standards.
a. Low-Density Residential (LR) Sub-District:
The intent of this sub-district is to provide for a diversity of urban housing products through flexible design standards. This sub-district will allow residential scale multi-family and limited service commercial uses.

Densities in the LR sub-district will range from 3-6 units per gross acre. The residential density directly adjacent to the co-located elementary school and City park sites will range from 6-15 units per acre on a net parcel basis to create more housing close to these community assets. North of W. Lake Hazel Rd. the maximum residential density will be 4.5 units per gross acre for the approximate 101-acre residential area. South of W. Lake Hazel Rd. the density is limited to an overall 6 units per gross acre. Actual development densities will be subject to economic and market conditions.

b. Medium-Density Residential (MR) Sub-District:
This sub-district will accommodate medium-density residential uses and provide an orderly transition from more intensive uses to less intensive, lower density uses. Apartments, row homes, and townhomes as well as professional office and commercial uses are allowed.

Residential densities for the MR sub-district will range from 10-20 units per gross acre. Actual development would be subject to economic and market conditions.

c. Village Center (VC) Sub-District:
The VC sub-district includes an 18-acre mixed-use Village Center integrated with the adjacent residential neighborhoods. A variety of retail, offices and restaurants are anticipated. Residential uses will include a mix of product types with densities up to 18 units/acre on a net parcel basis.

d. Commercial/Business Campus (CB) Sub-District:
Commercial and business uses will be the focus of this sub-district, ranging from a business campus, a grocery-anchored center and other commercial/retail uses that will serve the Syringa Valley population and beyond.

e. Industrial (IND) Sub-District:
This sub-district will allow for an employment center for clean industrial uses. No residential uses are permitted.

Most uses other than conventional single family housing, duplexes and townhomes will require design review approval by the City of Boise that will ensure quality design.
The following map shows the locations of the sub-districts within the property.

6. Land Use Plan

As outlined in the Southwest Planning Area chapter of Blueprint Boise, the future Planned Community was split into two Specific Plan areas referred to as Lake Hazel North and Lake Hazel South.
The Conceptual Masterplan map that follows combines those two areas into a single land use plan. In order to aid in the description of the plan, the residential planning areas have been labeled adopting the names of birds of prey.

The following land uses and intensities represent the intent of the Syringa Valley Specific Plan. Actual development uses, densities, product types, will reflect economic and market conditions needed support the viability of the planned uses.
a. Lake Hazel North

This area covers approximately 170 gross acres north of the W. Lake Hazel Rd., excluding the 50-acre Boise School District parcel. It includes three planning areas: a residential neighborhood, American Eagle, of 101 acres, a 40-acre Commercial/Business Campus and a 13-acre Industrial site.

The American Eagle planning area lies east of S. Cole Rd. and is adjacent the NY Canal at its southwest corner. The east boundary is S. Umatilla Ave. This planning area is included in the Low-Density Residential (LR) Sub-District and would provide a mix of housing types at a density range of 3-6 units per gross acre.

North of American Eagle is the existing South Fork subdivision. Lots planned adjacent to South Fork lots will match lot sizes to provide a buffer for South Fork and a transition to other smaller lot sizes in the planning area.

American Eagle will be the only neighborhood with direct access to S. Cole Rd. although that access is intended by ACHD to be temporary. Other access will be from W. Lake Hazel Rd. at S. Cheyenne Ave. and S. Umatilla Ave. and from W Latigo Dr. on the north boundary that will connect with S. Orchard St.
The *American Eagle* planning area has undergone subsequent subdivision design. The resulting Kirsten Subdivision Preliminary Plat has been submitted as application SUB15-00055. The neighborhood has been platted to include 412 single family lots plus 10 multi-family lots with 4 units each. The total number of units equals 452 at a density of 4.48 units per gross acre that is within the intended maximum density of 4.5 units per gross acre. The subdivision features a strong pedestrian-friendly walking environment with pathways, detached sidewalks, and tree lined streets. More description is provided in the Kirsten Subdivision section.

The final two planning areas are restricted by the Airport to non-residential uses. Located at the intersection of two key arterial roadways with a connection to Interstate 84, these areas are appropriately planned for commercial development, a business campus, and industrial uses.

The 40-acre Commercial/Business Campus planning area will be a mixture of commercial office and retail and other uses. Retail is planned to include services to provide Syringa Valley residents with day-to-day needs, such as a 60,000-square foot grocer, and other regional serving retailers that will take advantage of the site’s regional transportation network and encourage trip capture. This planning area would not include residential uses based on Airport restrictions.

Commercial/Business Campus planning area is also adjacent to properties on the north and east that will be planned for primarily industrial uses. The absence of adjacent single family housing and the early designation of these more intensive commercial uses in the Specific Plan avoids the typical conflicts with future residents if they are located close by. This planning area will be comprehensively planned with required City Design Review approval to create an attractive shopping and employment environment.

Future discussions will ACHD will be necessary as this planning area transitions to detailed site design to ensure that the contemplated access restrictions on W. Lake Hazel Rd. and potentially S. Orchard St. do not hamper the ability to attract anchor tenants, which would undermine the economic viability of the commercial development. Without strong anchors it will be challenging to attract the scale of commercial uses that will meet the needs of those that live and work in the community and to achieve meaningful resident off-site trip capture.

The 13-acre Industrial planning area located north of W. Latigo St. will be the location for employment uses that could include manufacturing, research and development, warehousing and distribution.

**b. Lake Hazel South**

South of W. Lake Hazel Rd. the site totals approximately 372 gross acres. Residential uses would occupy approximately 341 gross acres of the area after deleting the acreage for the NY Canal easement, the planned elementary school, and City park. The Lake Hazel South planning area is limited to a maximum density of 6 units per gross acre and the total number of residential units
permitted would be 2,046 (341 acres X 6). In order to track residential density in Lake Hazel South, a chart and map exhibit will be submitted with each future development application to demonstrate how an average of 6 units per gross acre will be achieved. Nine planning areas have been created that are bounded by an overall grid system of roadways. The north-south and east-west grid system of circulation streets encourages easy orientation and connectivity between the planning areas. South of the future W. Mossywood St. and east of S. Cheyenne Ave., the planning areas have dimensions of approximately 1,320 feet X 1,320 feet and total 40 acres. Each boundary street is one-quarter mile in length or roughly a five-minute walk. North of W. Mossywood St. the planning areas are slightly smaller at approximately 30 acres. The largest planning area, Hawk Lake, is located east of S. Cheyenne Ave. and borders the NY Canal. Due to the canal eliminating any street connectivity to the west, continuing the Lake Hazel South grid system of streets through this planning area is not appropriate.

As previously mentioned the overall density of the Lake Hazel South planning area is limited to 6 units/acre for the residential acreage. The planned Low-Density Residential (LR) Sub-District zoning allows 3-6 units per gross acre and the Medium-Density Residential (MR) Sub-District allows 10-20 units per gross acre. Individual planning areas will illustrate a density transect from higher densities adjacent the W. Lake Hazel Rd. corridor to lower density development near the south boundary of Syringa Valley adjacent the rural densities in Ada County.

Hawk Lake, Red Tailed Falcon and Snowy Falcon planning areas will offer lower density housing within in the density range of 3-6 units/ per gross acre as these areas are furthest from the more intense development planned adjacent the W. Lake Hazel Rd. corridor. The northwest corner of Hawk Lake has been planned as the location for the Syringa Valley Community Center and sports practice fields. Single family detached homes would predominate the housing mix in these planning areas although other housing types could be introduced.

Lanner Falcon will be the location of the 10-acre Kirsten Coughlin City park and a proposed 7-acre public elementary school site. The sites co-located, are central to the Lake Hazel South planning area, and are adjacent local streets with limited traffic volumes as required by the Comprehensive Plan. Residential development on land immediately adjacent to these uses is planned at a density of 6-15 units per acre on a net parcel basis. Townhomes, duplex, and cottage housing are the likely housing types and will form a transition to adjacent more standard detached single family units. Similarly, portions of the Kestrel planning area will adopt this density range for parcels across from the elementary school and park.

The Falcon, Greyhawk and Harrier planning area will offer the greatest diversity of housing of all of the planning units. Both LR and MR zoning sub-districts will apply. The higher densities take advantage of the transportation corridor and the close proximity to the planned junior high and senior high schools and the commercial services. Housing types could range from single family...
detached, duplex, townhomes, small multi-unit buildings and apartments that will allow innovative approaches to site design and integration of uses.

An approximate 18-acre Village Center is planned on S. Umatilla Ave. adjacent four of the planning areas. This pedestrian-oriented mixed-use center will provide residents with a walkable main street destination for shopping, and opportunities to enjoy events, entertainment, and dining. Functioning as a gathering place for the community, the center will help to activate the adjacent City park and elementary school. There will be a residential component to the center providing either vertical or horizontal mixed-use. Lofts, stacked flats, small multi-unit structures, townhomes and live-work units would be appropriate. Residential densities up to 18 units/acre on a net parcel basis are permitted. Wide sidewalks, tree planters and outdoor seating would provide an attractive pedestrian environment. Shared parking would be accommodated at the sides and rear of buildings.

For more detail on site design principles related to the northerly planning areas in Lake Hazel South see the Design Concepts and Guidelines section.

c. Syringa Valley’s Plan Consistency with Southwest Boise’s Reserve Plan

The Syringa Valley Land Use Plan is consistent with the design goals of the Boise Comprehensive Plan, and more specifically the Southwest Boise Reserve Plan. Southwest Boise Reserve Plan design goals are:

1. Establish a mixed use development with a range of residential housing types and densities, neighborhood commercial centers, and a business campus.

   *Syringa Valley’s zoning and design will support a mixture of housing types and densities with two neighborhood centers and a business campus.*

2. Establish a business campus with a mixture of uses, such as auto repair and service, fabrication, self-storage, and medical and professional offices. Incorporate other uses such as restaurants, health clubs and child care and convenience centers.

   *Syringa Valley’s North Neighborhood Commercial Center and Business Campus areas will encourage a mixture of businesses from self-storage to medical and professional offices with other supporting businesses like health clubs and child care.*

3. Limit residential uses in the northwest corner of Lake Hazel North.

   *With the design of the 101 acre Kirsten Subdivision located adjacent Cole Rd., residential densities have been limited through the use of LR zoning and creating a large lot buffer for the South Fork subdivision.*
4. Provide safe access to future schools for children to walk and cross Lake Hazel Road.

*Syringa Valley’s design has placed the future high school near ten (10)-foot wide paved pathways on both sides of W. Lake Hazel Rd. W. Lake Hazel Rd. and S. Umatilla Ave. will be a controlled intersection to provide safe access for future students. The future elementary school located near the Kirsten Coughlin Park is within walking distance for all the students plus is close to Umatilla Ave., which provides a safe place to cross W. Lake Hazel Rd.*

5. Develop two neighborhood commercial centers that incorporate pedestrian friendly design to provide for easy pedestrian access.

*Syringa Valley has two neighborhood commercial centers located north and south of W. Lake Hazel Rd. with design guidelines to promote pedestrian access.*

6. Provide a variety of residential housing types and densities, including from traditional single family to townhouse, row houses, multi-family and patio homes. Allow for live/work and other accessory dwelling units.

*Syringa Valley’s Sub-Zoning districts encourage and support a variety of residential housing types and sizes.*

7. Encourage the mixture of residential and commercial development along W. Lake Hazel Rd. with increased densities up to 10-20 units per acre.

*The MR Sub-District encourages the mixture of residential uses with increased densities and commercial uses.*

8. Encourage residential housing types such as townhouse, multi-family and patio homes around City Park with increased densities.

*Each of the planning areas near the Kirsten Coughlin Park have design goals to encourage residential housing types with increased densities of 6-15 units per acre on a net parcel basis.*

9. Near W. Columbia Rd. encourage decreased density to five (5) units per acre.

*Both the Red Tailed Falcon and Snowy Falcon planning areas have design guidelines to decrease densities near W. Columbia Road.*

10. South of W. Lake Hazel Rd. the overall plan shall limit the residential density to six units per gross acre density.

*The Syringa Valley Specific Plan, and its design goals, planning areas, and Sub-Zoning districts, set an overall goal density of 6 units per gross acre south of W. Lake Hazel Rd.*
and are designed to encourage development to reach this goal, if consistent with market conditions.

11. Interconnect the residential areas with the use of streets and pathways and bike paths.

   Syringa Valley creates an overall interconnected neighborhood through its circulation street network and pathways system.

12. Enhance pedestrian activity with the use of detached sidewalks, micro-paths and reasonable block lengths.

   Syringa Valley’s design requires all street sections to include detached sidewalks, and the circulation street pattern limits the block lengths. Each of the planning areas will include micro-paths to connect neighborhoods and open space.

13. Establish open space and a pathway along New York Canal and encourage dual use of drainage areas for open space.

   Syringa Valley has a pathway outside of the New York Canal’s easement where the residents can walk and has planned a Dual-Function Open Space/Active and Passive Recreation Area combining storm water retention and recreation.

14. Establish a co-location for an elementary school and City Park. The park site shall have two sides along public streets with connections to the pathway along the New York Canal.

   The Lanner Falcon planning area includes the Kirsten Coughlin Park and elementary school that are adjacent each other. The park and school will have access from two local public streets.

15. Land uses shall comply with restrictions of the Airport Influence Areas.

   Syringa Valley’s design and zoning comply with all the restrictions of the Airport Influence Areas. Additionally, an avigation easement will be recorded on all parcels within Syringa Valley.

16. Development should include a backage road to Lake Hazel Road.

   Falcon Lake St., on the south side of Lake Hazel Road, will provide access to all residential and commercial uses that front Lake Hazel Road’s limited access right of way.

17. Street network shall support development.

   Access and traffic concerns in Syringa Valley are being addressed with the design of the circulation street network.
7. Circulation Plan

The design for the Syringa Valley vehicular, bicycle and pedestrian circulation system is focused on the following objectives:

- Meet the intent of the ACHD design standards and guidelines
- Meeting the response and access needs of emergency service providers
- Provide an efficient and safe network of vehicular, bicycle and pedestrian facilities that support the multi-modal vision of the project
- Support the planned land uses of the development in a manner that encourages vehicular and pedestrian connectivity within and between neighborhoods and other land uses and amenities
- Create streetscapes that are safe, pleasant and comfortable for a diverse population
- Improve the health of residents by providing convenient facilities that encourage walking and cycling
- Reduce vehicle trips through community design, travel demand strategies, and transit options

Syringa Valley will also construct off-site transportation improvements required by ACHD that mitigate impacts from Syringa Valley and ensure the surrounding roadway system will operate safely and efficiently. The roadway hierarchy and site circulation are shown on the Street Circulation map and the pedestrian and bicycle circulation system is illustrated on the Open Space and Pathway map.

a. Arterial Network

S. Cole Rd., W. Lake Hazel Rd. and S. Orchard Rd. north of W. Lake Hazel Rd. are classified as existing or future Principal Arterials that will connect the community to other regional commercial, employment and activity centers. W. Lake Hazel Rd. is designated as a mobility corridor by ACHD and is planned to extend to the Eisenman Interchange on Interstate 84 creating a transportation corridor from the Interstate to west Ada County. An important initial step is the near-term planned extension of W. Lake Hazel Rd. and S. Orchard St. from S. Cole Rd. to Gowen Rd. as an interim two-lane facility. This planned roadway is anticipated to relieve traffic congestion on S. Cole Rd., and will create an addition connection to Interstate 84 at the Orchard Interchange.
ACHD has previously reviewed the Syringa Valley applications and determined the following access management provisions:

- Between S. Cole Rd, and S. Orchard St., there will be three intersections on W. Lake Hazel Rd. at S. Cheyenne Ave., S. Umatilla Ave. and S. Falcon View Ave. (quarter-mile spacing). No driveway access or on-street parking would be permitted along W. Lake Hazel Rd.
- Future traffic signals will be located at S. Cole Rd., S. Umatilla Ave. and S. Orchard St. (half-mile spacing)
- The S. Cheyenne Ave. and S. Falcon View intersections will ultimately become right-in and right-out intersections when W. Lake Hazel Rd. is developed to five lanes. Depending on the conclusions of future traffic studies, left-in movements may be allowed at S. Cheyenne Ave. and S. Falcon View Ave. Left-out movements onto W. Lake Hazel Rd. would not be permitted.
- W. Lake Hazel Rd. will be the single access to the community from the west in the future. A temporary 24- foot driveway access to S. Cole Rd. at W. Eagle Grove St. in the Kirsten Subdivision would be allowed prior to the construction of the W. Lake Hazel Rd. from S. Cole Rd. The temporary access would be closed after the 171 lot or when 1,770 vehicle trips per day are exceeded on S. Cole Rd.

Due to these access restrictions a backage road will be required between south of W. Lake Hazel Rd. to provide access to the commercial, office, and higher density residential uses located on the south side of Lake Hazel Rd.
While a mobility corridor that meets current ACHD access management policies is understandable in an exclusively low-density residential environment, the access restrictions on W. Lake Hazel Rd. represents a serious constraint for the future development of this mixed-use and denser planned community. The viability of the Commercial/Business Campus and Village Center planned uses could be impacted. Further discussions with ACHD will be necessary to create access flexibility when site specific plans for those areas are developed.
In addition, the inability to turn left from the community onto W. Lake Hazel Rd. from within the community except at the S. Umatilla Ave. signal will concentrate traffic at that intersection requiring a very large intersection design. The design could require multiple double left-turn lanes and additional right-turn lanes. The scale of this intersection will be a challenge for pedestrian and bicycle crossings.

b. Non-Arterial Street System and Standards

The Syringa Valley street system is intended to provide a pedestrian-scale circulation system based on the standards and typical sections as outlined in ACHD policies. Over the development period of the community, the street plan could respond to modifications of ACHD policies whether initiated by the District or by the Syringa Valley developer that support the objectives stated above.

Specific design elements to accomplish a pedestrian-scale system include:

- Wide sidewalks separated from roadways with 8-foot planter strips that provide shade from street trees
- Multi-use pathways separated from streets
- Alley-loaded homes that reduce the conflict areas between vehicle and pedestrians and bicycles
- On-street parking along streets fronting residential and commercial uses
- Narrower street standards on low volume local streets
- Intersection treatments that reduce pedestrian crossing distances and vehicle travel speeds
- A grid system of streets with short blocks, intersection density, and frequent mid-block pedestrian connections

Given that the topography of the site is moderate, the proposed internal circulation streets are designed on a north-south and east-west grid system with roughly one-quarter mile spacing. This grid provides robust connectivity between the planning areas while allowing multi-directional traffic distribution. The grid system also allows future interconnection with adjacent properties when they develop.
The following are the proposed non-arterial road sections:

Collector Road Section

Local Road Section
c. Pedestrian and Bicycle Circulation System

One of the key Syringa Valley community development principles involves the creation of a healthy community. Recent work by the Urban Land Institute, AARP, Robert Wood Johnson Foundation, Colorado Health Foundation and others have shone a light on the intersection of individual health and the built environment. How we construct the built environment has a great bearing on health outcomes. Syringa Valley fully supports making the healthy choice the easy choice by offering a menu of options for physical activity that are accessible for all.

Fortunately, there is significant market support for walkable communities as it is well documented that the two largest demographic groups, Baby Boomers and Millennials, have
demonstrated a preference for walkable communities connected to services and amenities, whether in an urban or suburban environment. In fact, according to the Urban Land Institute, 50% of U.S. residents say that walkability is a top priority or a high priority when considering where to live.

Syringa Valley represents a comprehensive planning opportunity at a scale where a holistic approach to healthy living is afforded. This is in contrast to the design of smaller incremental developments where only certain elements can be considered. The Syringa Valley pedestrian and bicycle circulation system is an example of a design element that will promote active transportation and benefit the health of its residents. There are also economic savings from reduced automobile use.

To encourage residents to walk, there first must be the physical infrastructure. As noted by Jeff Speck in *Walkable City: How Downtown Can Save America One Step at a Time*, infrastructure must be useful, safe, comfortable and interesting. Pathways and sidewalks must be in the right location; designed to make all users feel safe and comfortable; be located in pleasant surroundings; and have a mix of every day destinations in close proximity to the individual's location. Destinations may be amenities, stores, restaurants, offices, or simply visiting a friend.

Incorporating specific design elements mentioned above will create a pedestrian-scale street system. The mixed-use nature of the community will also support walkability. The ¼-mile radii walking distance from the Village Center and the overlap with the same ¼-mile radii from the City park and elementary school concentrate key activity areas in close proximity to the highest density planning areas. The ½-mile radii from the Village Center includes almost all of Syringa Valley creating a community of short distances to the heart of the community.
The Syringa Valley pedestrian and bicycle system plan includes three major backbone circulation features. First a 10-foot paved multi-purposes pathway will be constructed along both sides of W. Lake Hazel Rd. through Syringa Valley. The pathways are in addition to bike lanes that will be included in the 5-lane street section (the interim 2-lane roadways will have 8-foot paved shoulders to accommodate cyclists). In addition to these bike lanes, other bike lanes are planned for key roadways, and sharrows will be installed on the other lower volume streets.

The 10-foot pathways will be separated from the curb within the 30’ landscape buffer as shown earlier on the Lake Hazel Road Section exhibit. The pathways will provide a pleasant pedestrian and off-street cycling route for adults and children to connect to the proposed secondary schools, Village Center, planned elementary school, City park, and the Commercial/Business Campus.

The second feature will be an 8-foot paved trail along the NY Canal at the base of the canal bank. This pathway will connect to the planned Community Center and sports playfields in Hawk Lake and to the pathway along the south side of W. Lake Hazel Rd. The NY Canal pathway might become the start of a larger pathway system adjacent the canal in the future.
The third feature is an 8-foot paved Community Pathway that will knit the community. It will weave through the nine planning areas south of Lake Hazel South in a 25-30-foot (minimum) pathway corridor and will link to the NY Canal pathway, Community Center, Village Center, City park and elementary school. The corridor width may be narrower in constrained areas, such as along S. Umatilla Ave.

A similar pathway will be established in the American Eagle planning area in Lake Hazel North, although dimensions will vary.

The pedestrian and bicycle circulation system provided by these three linked pathways offers alternative travel modes throughout the community. As simply a fitness opportunity, the system is a looped 4-mile workout route.

Supplementing these backbone features will be neighborhood pathway systems within each of the planning areas. These interior connections will be 5-foot paved pathways within 15-foot (minimum) corridors. These pathways will link residents to the amenities and open space in the planning areas and connect with the backbone pathways providing a seamless pedestrian and bicycle system. The Kirsten Subdivision Preliminary Plat within the American Eagle planning area demonstrates the pathway system concept that will be applied to other planning areas.
d. Public Transportation

Valley Regional Transit (VRT) is the regional transit authority and operates the public transportation system in the Treasure Valley. The closest current transit corridor is on Overland Rd., three miles north of Syringa Valley. This corridor provides Intercounty bus service between Boise and Nampa. Additional connecting routes serve West Junior High and Frank Church High School south of W. Victory Rd., and the Boise Airport and downtown Boise along the Vista corridor. VRT also operates the ACCESS paratransit service for the disabled, GoRide Mobility Program for the disabled and elderly, Job Access Vanpool, and Vehicle Sharing programs that complement the existing fixed-line bus system.

Preliminary discussions with VRT have identified the potential to use the project as a prototype for innovative transit solutions that would be technology based. It is unlikely given the funding constraints for public transportation that a fixed route would be established to provide transit
service for Syringa Valley. Syringa Valley and VRT will continue to collaborate on future options to provide service to the community.

ACHD’s Commuteride van program is a well-established option for residents of Syringa Valley. With the completion of the Lake Hazel-Orchard extension this service would be attractive to groups of commuters employed in downtown Boise, the Airport employment area, and perhaps Micron. Syringa Valley will assist ACHD in promoting this alternative. ACHD’s Guaranteed Ride Home also supports those who travel by alternative modes when circumstances prevent the individual for using that alternative mode to return home.

e. Trip Reduction Strategies

The goal of these strategies is to reduce the reliance on single occupant vehicles for internal trips as well as external trips from the community. The Specific Plan incorporates key strategies including:

- A land use concept that promotes trip reduction through a mix of commercial, retail, institutions and recreational activities within the community accessible by walking and bicycling
- A pedestrian and cycling plan designed to provide access to the mix of uses through a system of separated pathways and on-street bike lanes
- A land use plan with residential densities that consider future transit opportunities
- Planned collaboration with Valley Regional Transit (VRT) to study Syringa Valley as a prototype for technology driven transportation programs
- Promotion of the ACHD Commuteride program to provide links to key employment destinations based on resident demand

The Syringa Valley Transportation Impact Study (TIS) was completed in 2013 and projected the percent of trips that would be captured on-site would be 6 percent. The Institute of Traffic Engineers (ITE) methodology utilized for the analysis was a very simplistic tool at that time, basically establishing only three basic land uses types (office, retail, residential) with no differentiation as to uses within the types. Since that time new methodologies have been developed and adopted by ITE that allow for a more fine-grain analysis of a broader group of uses. Syringa Valley will be required to update the internal trip capture analysis with each update of the TIS and will use the new tools.
8. Infrastructure Plan

a. Water

The municipal water provider will be SUEZ as the property is within SUEZ’s Certificated Area. SUEZ is a private water utility company regulated by the Idaho Public Utility Commission. The company is the primary municipal water supply provider for the City of Boise and will provide all of the domestic water and the majority of the irrigation water for Syringa Valley. The New York Irrigation District will deliver a limited amount of irrigation water from the NY Canal to 26 acres adjacent the canal during the irrigation season.
Looped water distribution lines for the project will be extended by Syringa Valley from the 16-inch water transmission line that was installed by SUEZ in the western portion of the property. The location and timing of extensions to be installed by Syringa Valley will reflect the development phasing of the project and will provide adequate water and fire flow for the residential development. The location of the 16-inch transmission line follows the alignment of the future S. Cheyenne Ave. and W. Eagle Grove St. in the Kirsten preliminary plat area. A storage reservoir will likely be required in the Commercial/Business Campus or Industrial planning areas to provide fire flow for the future commercial development.

SUEZ has an integrated water system of groundwater wells and pipelines as well as water from the Boise River that is treated at the 20 MGD Columbia Water Treatment Plant east of Micron. Syringa Valley will be supplied primarily by groundwater wells in the Gowen service area, but SUEZ has the ability to cascade water from higher elevation service areas (Ten Mile or Columbia) to the lower elevation Gowen service area if required. Consequently, SUEZ has a number of water sources and has the ability to control the use of these resources to minimize impacts on existing wells and water rights, all subject to the oversight of the Idaho Department of Water Resources.
b. Sewer

Sewer collection and treatment will be provided by the City of Boise. A 15-inch sewer main is stubbed at W. Lake Hazel Rd. and Cole Rd. and will provide the sewer service for the project. Syringa Valley will install collection sewer lines with each development phase. To access the 15-inch trunk sewer Syringa Valley will install a lift station north of W. Lake Hazel Rd. near the NY Canal. The lift station will pump sewage north to a new gravity line in Cole Rd. that will connect to the trunk, or will pump across the canal to the trunk in a pipe attached to the bridge. Currently, boring under the canal with a gravity line is not permitted, but the City and other municipalities are collaborating on developing a design and spec that might be approved by the Boise Project Board of Control, who operate the canal.

When the new lift station is brought on line, the existing sewer lift station located on Cole Rd. just north of the property that provides service to the South Fork community will be decommissioned.

c. Power

Idaho Power will provide electrical service to Syringa Valley. Coordination is currently underway to develop a preliminary design for the initial phases. The project will be responsible for any system upgrades that might be required for future phases of development subject to Idaho Power policies approved by the PUC.

d. Gas

Gas service will be provided by Intermountain Gas. Preliminary discussions are underway for the design of the distribution system. As with power supply, Syringa Valley will be responsible for system upgrades in accordance with Intermountain Gas policies approved by the PUC.

9. Public Service and Facilities

a. Public Schools

East of the American Eagle planning area is the 50-acre Boise School District property currently contemplated as a joint junior high and senior high school location. The site is located with access to the W. Lake Hazel Rd. and S. Umatilla Ave. intersection that will be signalized in the future. S. Falcon View Ave. will be the east boundary providing an additional connection to W. Lake Hazel Rd. To the north W. Latigo Dr. will provide connectivity to S. Orchard St. and enhance access to the regional transportation network for future students and staff.
CBH and the School district have had initial conversations regarding a donation by CBH of 7 acres for an elementary school in the Lanner Falcon planning area south of W. Lake Hazel Rd. The signalized crossing at W. Lake Hazel Rd. and S. Umatilla Ave., 10-foot pathways along W. Lake Hazel Rd. and the other pathways described earlier will provide safe routes to the schools.

The School District has indicated that the timing of school development is unknown and will be determined by the growth of enrollment in Syringa Valley and in the district overall. Currently, the schools assigned to Syringa Valley are Hillcrest Elementary School, West Junior High School and Borah Senior High School.

**b. City Park**

The prior owner of the property completed a land exchange/donation agreement with the City of Boise to provide a 10-acre City park site. The final location of the site will be determined by the Specific Plan approval. The City Parks Department has indicated that there are no immediate plans or funding for the site. Development of the park will be funded through Park impact fees assessed on new residential development in the area. Representative of the Parks Department have stated that when the park planning process is undertaken it would include engagement with the area residents. The park will be named Kirsten Coughlin Park.

**c. Fire Protection**

Currently the project is serviced by Boise Fire Station 17 located at 3801 S. Cole Rd. The Fire Department supports the rezone as the area is within the existing city limits and was anticipated for future development. The Department noted that portions of Syringa Valley would be outside the 1½ mile or 4-minute response time and that proposed future stations will be needed to service the entire area. Future stations may be located in the area of W. Lake Hazel Rd. and S. Orchard St., but an exact site has not been finalized at this time.

**10. Community Features and Amenities**

Syringa Valley will provide many community and neighborhood amenities that will attract buyers to settle in the area. The Community Center, Dual-Function Open Space/ Active and Passive Play Area, and Neighborhood Parks and Pool Facilities all provide recreational opportunities for a wide range of user groups and age ranges.

All of the Syringa Valley community features and amenities will be linked with a strong vehicular, bicycle, and pedestrian network to encourage connectivity between neighborhoods and land uses. As detailed in the Circulation Plan section of this document, the community
circulation system will provide safe and pleasant passage, and improve health and fitness of the residents by providing convenient facilities that encourage walking and cycling.

a. Community Center

A Community Center facility will be located in the Hawk Lake planning area south of W. Lake Hazel Rd. adjacent to the NY Canal. This 5,000 – 7,500 square foot facility will provide many desired amenities for the entire community. The Community Center is planned to house a Community Welcome Center, Community Association offices, meeting/library/gathering rooms, kitchenette accommodations, fitness/weight room, indoor racquetball courts, and restroom/changing rooms. Outside the Community Center structure will be an adjacent large outdoor swimming pool (approximately 35x70 feet in size with a kid pool and/or splash pad), playground/tot lot, and lighted tennis and basketball courts. An on-site parking lot will provide ample parking for facility use patrons.

b. Dual-Function Open Space / Active and Passive Recreation Area

Adjacent to the Community Center will be a Dual-Function Open Space component (discussed further in the Environmental section). This area will serve as both a stormwater storage facility and an open play/sports practice field for the community. One of the Blueprint Boise policies is to encourage dual purpose drainage areas that provide usable open space and/or amenities.

The depressed stormwater area will occupy approximately 2-3 acres and be able to accommodate approximately two (2) full size football/soccer fields or several youth practice fields. Other recreation activities such as a dog park and community gardens are planned. The
community garden further supports the community development principle of creating a healthy community. This location will also take advantage of the setting provided by an existing grove of trees near the canal.

The total acreage planned for the Community Center and the Dual-Function Open Space/Active and Passive Play Area will be 10-12 acres.

c. Neighborhood Parks/Pools

Each neighborhood planning areas will have 1-2 acres of planned park area centrally located for convenient access for the surrounding residents. Each park area will contain an appropriately sized tot lot/playground area for anticipated user groups, a picnic shelter/shade structure. Additional neighborhood open space will provide passive recreation areas with seating.
A neighborhood pool with be planned for approximately 350-400 housing units (excluding multi-family housing areas that are assumed to have their own pools). The outdoor pools will be approximately 25 x 50 feet in size and contain restroom/changing room facilities and smaller neighborhood meeting rooms.

All park and pool facilities within the neighborhoods will be open for community-wide use.

11. Open Space Management

With the exception of the Kirsten Coughlin City park, sites controlled by the Boise School District, and the NY Canal easement maintained by the Boise Project Board of Control, the developed open space, natural areas, pathways and other amenities within Syringa Valley will be owned and maintained by a Syringa Valley community association. All residential lot owners will be members of the association and will be subject to assessments to fund the maintenance responsibilities and other operations. The community association may also have maintenance responsibility for landscaping within ACHD rights of way pursuant to a license agreement.

Policies SW-CCN 2.8 and 2.9 in Blueprint Boise require the dedication to the City of Boise of open space and a pathway adjacent the NY Canal, and dedication of a pathway connection from the elementary school/City park to the NY Canal pathway, if acceptable to the Parks and Recreation Department. Syringa Valley and the Parks Department have not commenced discussions related to this possible dedication.

Research regarding community associations reveals that there are various models that need to be examined related to the community association governance structure and funding. This investigation will be on-going through the design of the initial phase of residential development.

12. Environmental

This section will address the following environmental factors and demonstrate how Syringa Valley will not only mitigate potential impacts, but could become a future case study for the implementation of best practices:
- Light pollution
- Storm water management
- Water conservation

a. Light Pollution

Syringa Valley enjoys a high desert location surrounded by open land and rural residential neighborhoods. Light pollution from new subdivisions can have a detrimental impact on area residents long accustomed to darker skies. While lighting must provide for required safety and security, it need not pollute night-time skies. The following are principles that will be help guide the Syringa Valley development:

- Street light fixtures should be designed to focus light down to avoid spillage to adjacent properties
- Lighting should be limited to the building or residence areas and should not cause glare or spill onto neighboring lots.
- Recessed down-lights should be encouraged at residence entries and patios
- Surface-mounted light fixtures should have shielded light sources with bulbs or tubes not directly visible.
- The use of wall or eve-mounted floodlights, including motion-sensor lights, should be prohibited in residential areas
- Landscape lighting should also be shielded from view and controlled by an electric clock or photo cell
- Skylights can provide objectionable light spillage and glare in the night sky. Interior lighting near skylights should be shielded and skylights should be screened from adjacent properties.
- Parking lot lighting should be designed to have minimal effect on surrounding properties and buildings. Lighting should be directed downward.
- Blinking or flashing lights, and exposed neon lighting used to illuminate building faces or to outline buildings should be prohibited
- Business signage should avoid glare or visual interference for vehicular or pedestrian safety

b. Storm Water Management

The natural drainage pattern across the site is from a northeast to southwest direction with the low point of the site adjacent the NY Canal just south of the W. Lake Hazel Rd. canal crossing. Due to the elevated canal, water is impounded and consequently virtually all of drainage will be retained on-site. The possible exception could be minor flows from the most southerly portion of the property to Eight-mile Creek.
As a result of these conditions, the site offers an excellent environmental opportunity for groundwater recharge. Preliminary engineering plans have indicated that recharge would be accomplished by the following practices and in accordance with best management practices (BMP’s) approved by ACHD and the City of Boise. These green practices minimize the need for a piped storm drainage system infrastructure. The practices are:

- Landscape swales
- Seepage beds
- Borrow ditches
- Community storm drain facility – dual use facility
- Pervious pavement

**Landscape Swales**

Shallow swales will be established in the 8-foot landscaped parkway between the back of curb and the sidewalk on residential streets. The swale will capture some natural rainfall and will minimize nuisance water from on-lot sprinklers and lot runoff from reaching the street. There would be no restrictions on landscaping in the swales including installing trees. The resulting water harvesting has the added benefit of supplementing irrigation water required for the landscaping in the parkway strips.
Seepage Beds

Seepage beds would not be effective in areas of high groundwater, but with the depth to groundwater a minimum of 80 feet, these facilities will prove very effective at Syringa Valley. Seepage beds can be located in street rights of way and open space parcels within subdivisions. BMP’s allow for four levels of treatment to ensure appropriate water quality. It will be necessary to break through the duripan level to permit the water to recharge through the fractured basalt.

Borrow Ditches

The interim 2-lane design for W. Lake Hazel Rd. and S. Orchard St. includes 8-foot borrow ditches on either side of the pavement to capture drainage from the roadways. ACHD has developed a design that will allow the water to recharge after breaking through the duripan layer where required.
Community Storm Drain Facility

Preliminary engineering indicates that there will be a need of a 2-3-acre storage facility primarily to retain drainage from W. Lake Hazel Rd. when the road is constructed to the planned 5 lanes with curb and gutter. The facility could also handle drainage from some residential areas and the Village Center. It is expected that the depth of the facility would be 1-2 feet. As with the seepage beds there will be a need to break through the duripan level to permit water to recharge.

As noted earlier, the storm drain facility is the location of the Dual-Function Open Space/Active and Passive Play Area adjacent the Community Center and thus serves a storm drainage and community recreation purpose. This is also the portion of the property that receives irrigation water from the NY Canal, which will be used to maintain the green playfields.

Pervious Pavement

Pervious pavement treatments are planned to be located in select areas of the Village Center and the Commercial/Business Campus planning areas. In addition to excellent water infiltration capabilities, the pavers provide an enhanced appearance. An underdrain from the Village Center to the community storm drain facility can be installed if required.
c. Water Conservation Strategy

Landscape Vision

The landscape vision for Syringa Valley will embrace and enhance the natural surrounding South Boise environment. Using the Principals of Waterwise Xeric Landscape Design, as listed below, both common and private landscape areas will be visually appealing while creating landscape sustainability within the high-desert climate conditions of the Boise Valley.

- **Planning and designing for water conservation, beauty and utility:** The Syringa Valley landscape vision will apply the principals set forth in the community wide water conservation strategies. Landscape design guidelines will establish appropriate design standards, plant material, and irrigation methods to ensure a beautiful and functional xeric landscape is implemented.

![Xeric Residential Landscaping](attachment:Ordinance_CAR15-00029_Syringa Valley-Specific Plan (ORD-13-20 : CAR15-00029 / Ordinance))

![Xeric Residential Landscape Examples](attachment:Ordinance_CAR15-00029_Syringa Valley-Specific Plan (ORD-13-20 : CAR15-00029 / Ordinance))
• **Creating Practical Turf Areas:** Large grass turf areas will only be utilized in functioning recreation zones. Turf areas will be restricted in small common landscape areas and private residential lots.

• **Xeric Plant Selection and Hydrozoning:** A list of suitable plant species for low water consumption will establish a guide for proper xeric plant selection. Plant types are to be grouped according to water needs to efficiently irrigate landscape areas with different climate exposures and drainage capabilities. Improved soils with a rock or bark mulch over-lay will be necessary to help retain moisture within the planting areas.

  ![Sample Waterwise Xeric Plant Palette](attachment:Ordinance_CAR15-00029_Syringa Valley-Specific Plan (ORD-13-20 : CAR15-00029 / Ordinance))

• **Efficient Irrigation methods:** Strict irrigation standards will be set to establish and maintain the xeric landscape environment. The use of high-efficiency, low-volume irrigation systems will be required to protect the water conservation strategies.
• **Maintaining with Good Horticultural Practices:** Maintenance and management of new and established landscapes through the homeowner’s association, and development guidelines will be provided. On-going community education of the Principals and Maintenance of Xeriscape Landscape Design will be provided through demonstration gardens, educational workshops, and promotional fliers to help reinforce the landscape vision for Syringa Valley.

To implement the Landscape Vision, Syringa Valley is proposing the following water conservation strategy:

**Water Conservation Strategy Goals**
1. Reduce residential indoor and outdoor water use by approximately 40-50% compared to typical subdivisions with pressurized irrigation (surface water or groundwater) and 20-25% compared to typical subdivisions without pressurized irrigation
2. Design common area landscape to meet the functional and aesthetic needs of Syringa Valley and to limit long term irrigation use
Water Conservation Approach – Design, Management and Education

1. Design
   a. All homes to include low-flow plumbing fixtures, recirculating hot water pumps, and low water use appliances
   b. Water all landscaping with automatic underground irrigation systems
   c. Use a centralized, time controlled irrigation system linked to a weather station for watering common area landscaping
   d. Require drip irrigation for all shrubs and trees, except within approved turf areas
   e. Create a hierarchy of landscape zones that reflect each zones location and purpose to reduce irrigation requirements
   f. Limit landscaping to primarily low water use or xeric plant material per an approved plant list (subject to plant availability)
   g. Prohibit the use of turf as a general ground cover. Turf areas are restricted to common areas designed for gathering, picnicking, open field play, and limited areas on private lots. Turf may be considered in locations where erosion is a concern. Low water use turf varieties to be used
   h. Create practical turf areas of manageable size and shape based on appropriate uses
   i. Prohibit swimming pools or water features on private residential lots
   j. Preserve native vegetation in undisturbed areas
   k. Revegetate disturbed areas in natural open space with native plant material and irrigate with temporary irrigation only
   l. Plant low water use deciduous trees along streets to provide shading for pedestrians. Use only native grasses in streetscape landscaping
   m. Grade open spaces to create water harvesting areas for shrubs and trees
   n. Select plants for their low water use, seasonal color, and ability to blend with the natural landscape

2. Management
   a. Enforce Syringa Valley landscape restrictions through covenants, deed restrictions and a permitted plant list
   b. Limit turf on private residential lots to 30% of available lot area or a maximum of 2,500 square feet, whichever is less
   c. Discourage turf on residential lots 50 feet wide and prohibit on lots smaller than 50 feet wide
   d. Prohibit or regulate uses or activities that consume excessive amounts of water
   e. Require compliance with Syringa Valley architectural and landscape design guidelines, including water restrictions, for all residential and non-residential uses
f. Install low water use front yard landscaping as part of home construction

3. Resident Education
   a. Create educational materials to inform residents and other property owners, or users of the landscape vision for Syringa Valley, landscape approval process, water conservation practices and xeriscape principles
   b. Create a demonstration project with plant material explanatory signage
   c. Stage landscape workshops and clinics for residents

Water Conservation Educational Material Examples
13. Design Concepts and Guidelines

As stated in the Community Vision section, the following community development principles were established to guide Syringa Valley planning and design:

1. Create a healthy community that is active, walkable and connected
2. Design a Village Center for community gathering and social engagement
3. Adopt street patterns and building orientations that focus life on the street
4. Utilize open space as an organizing element in neighborhood design
5. Support education through the community plan
6. Become a model for water-wise community development
7. Offer a diversity of housing choices to match consumer incomes, preferences, and life stages
8. Include locations for community services meeting day-to-day needs designed to encourage short auto trips and other travel modes

a. Non-residential and Multi-Family Guidelines

The overriding architectural design concept for all non-residential and multifamily structures (excluding townhomes) in Syringa Valley is one of context — the buildings should create a distinct identifiable neighborhood by responding to our unique Boise climate and high desert landscape through design, sun shading, materiality, and color. They should be compatible with each other, while expressing individuality. The designs should not mimic historical styles but be of their own time and place. These structures will comply with Boise City’s Citywide Design Guidelines and approval processes (however, Syringa Valley setbacks and height limits are set forth in the Syringa Valley SP-03) with the intention to:

- Promote compact, walkable development patterns;
- Promote original and high quality design;
- Enhance the character and function of Boise’s streets;
- Promote sustainable design principles;
- Promote design that enhances the “sense of place” for neighborhoods;
- Increase the awareness of design considerations amongst the citizens of Boise; and
- Maintain and enhance property values within Boise.
Non-Residential and Multi-Family Development Principles are as follows:

- Develop a grid system of streets to promote connectivity
- Create walkable and connected development sites
- Allow pedestrian connectivity through development sites
- Design detached sidewalks along tree-lined streets
- Establish a mix of housing choices and other uses
- Provide site flexibility for different product types
- Place buildings to the street
- Position buildings at a consistent street setback to make streets feel like outdoor rooms
- Design building walls with more frequent entrances and large ground floor windows to enliven the street
- Orient buildings to face the street with a front (primary) entry door accessing the public sidewalk.
- Position off-street parking to the rear of a building, with parking at the side as an interior lot option; never at street corners.

Given the access management restrictions along W. Lake Hazel Rd. and S. Orchard St., parcels adjacent these roadways should be allowed to establish block lengths by means of a significant pathway or by a change in architectural element.

The following Block Prototypes are concepts developed to illustrate principles. Actual development will be subject to future specific development applications.

b. Village Center Guidelines

The Village Center is the heart of the community. At the entry to the Village Center, wide green areas flanked by multifamily housing allow for views of the gateway retail buildings, which welcome residents and visitors to the social activity center of the community. The north/south through-collector street curves west, while the retail/entertainment street curves east away from busy traffic. The Village Center provides small retail shops and services, and offices, and a community plaza for gatherings and events. A public elementary school, and the 10-acre Kirsten Coughlin Park are nearby.
Retail/service/office buildings are close the street with wide sidewalks for displays and outdoor dining. Parking is at the rear with pathways to the building front entrances. The elementary school fronts the plaza with symbolic ‘pride of place’ sharing community events such as movie nights, fairs, and farmers’ markets. Small cafes and activity-generating businesses could occupy the plaza’s corner locations. Across streets, residential uses face the plaza, school and park with alleys behind, making plenty of on-street parking available. Multifamily housing fronts the streets with interior pathways creating a comfortable, safe walking, biking environment.

Syringa Valley Village Center Concept
c. Commercial Business Campus Guidelines

The Commercial Business Campus may have a variety of sizes of buildings. With limited vehicular access to the arterials, a combination of streets, service drives and parking drive aisles will serve as a grid of circulation within the area, including a complete connected network of sidewalks/pedestrian pathways. Buildings will face the streets with active entries. Parking shall be at the rear or side, never at street corners.
d. Single Family Residential Homes, Duplexes and Townhomes Guidelines

To create visual interest, a variety of housing types and sizes are encouraged on a single block face. Block lengths should be less than 500’ long unless bisected with a significant pedestrian pathway. Block faces shall be composed of diverse facades that face the street or common green spaces with front doors, porches or stoops to create a friendly street environment. A variety of lots widths and house sizes along the block is encouraged. Front façade locations should be staggered along the block.

Single family residential homes, townhomes and duplexes should respond to climate and high desert location through design, sun shading, materiality, and color. Entries should face the street/common area. Entry elements should be in scale with the home and not be over-sized or stylized. Front facades should incorporate a variety of design elements such as recesses, bays, dormers, trellises, pergolas, balconies and projections to create visual interest. Windows should be consistent but with a variety of sizes that are appropriate to their room and function. Finish materials should wrap building corners to a natural visual break. Vinyl siding is not allowed. Great care should be taken with trim and joint covers.

Garages, when located in the front, should have a secondary presence and not dominate the façade. Garage doors should be behind the front façade of the home or porch. Oversized garages for RV’s are not allowed except on lots over 10,000 square feet.

Mechanical equipment (condensers, fans, etc.) shall be screened from street view. Plumbing stacks, chimney vents, and other roof projections shall be painted to match the roof color. Energy and water conserving strategies, along with other sustainable building practices should be incorporated in the buildings and landscaping.
14. Conceptual Phasing

Development of the property is planned to begin adjacent S. Cole Rd. and the NY Canal as represented by the Kirsten Subdivision. Future phasing would continue in an easterly direction as this is the logical manner to extend sewer and water infrastructure based on the location of existing trunk utilities and on topography and drainage patterns. Development in Lake Hazel South could occur simultaneously with the Kirsten Subdivision. The location, scale, housing mix, and pace of the development phases will be dependent on economic and market factors.

As each of the planning areas develops, the planned neighborhood pools, parks and pathways will be constructed. The main Syringa Village amenity, the Community Center facility and adjacent active play and sports practice fields, would be programmed for completion during the development of the Kirsten Subdivision.

The timing of the 4-mile community pathway system linking the planning areas will be phased with the development of the planning areas. The detached sidewalks and neighborhood pathway system will provide interim connectivity.

As mentioned previously the timing of the proposed schools and the City park is unknown and is dependent on programming and funding by the Boise School District and the City’s parks and Recreation Department. Syringa Valley will move forward with the offer to donate 7 acres for an elementary school when approval of the Syringa Valley project is secured.

The phasing of the Commercial/Business Campus will be dependent on securing appropriate anchor tenants. Typically, that will occur when enough roof tops are constructed at Syringa Valley and adjacent areas, and traffic counts on W. Lake Hazel Rd. achieve levels that can support the hurdle rates in a user’s financial model. The Village Center is anticipated to be one of the later development phases as these mixed-use specialty centers require a critical mass to achieve sales per square foot that will justify rents to support new construction.

a. W. Lake Hazel Rd - S. Orchard St. Extension

The timing of construction of the arterial road system to serve Syringa Valley is of critical interest to residents and commuters in southwest Ada County due to their frustration with delays on S. Cole Rd. in the morning and evening peak hours. The residents along W. Hollilynn Dr. are additionally concerned about cut-through traffic headed to and from the State Correctional Facilities on Pleasant Valley Rd. and National Guard facilities at Gowen Field.

ACHD’s review of the Syringa Valley applications in January 2016 included a summary of planned improvements to S. Cole Rd., W. Lake Hazel Rd. and S. Orchard St. The Victory Rd.-S. Cole Rd. intersection improvements and widening of S. Cole Rd. from Victory Rd. to McGlochlin St. were scheduled for 2020 and the W. Lake Hazel Rd. and S. Orchard St. improvements were
planned for the period 2022-2026. ACHD’s approval of the Kirsten Subdivision Preliminary Plat allowed up to an additional 1,770 vehicle trips per day (170 lots) on S. Cole Rd. from a temporary access at W. Eagle Grove St.

Since the ACHD decision, CBH has engaged with ACHD to accelerate the construction of the W. Lake Hazel Rd. and S. Orchard St. extensions. These improvements would be initially constructed as interim 2-lane roadways from S. Cole Rd. to Gowen Rd. CBH and ACHD are currently reviewing a draft Cooperative Development Agreement that will spell out the responsibilities of each for road design and construction in this model public-private partnership. The targeted completion date for the interim road connection is May 2018. CBH’s signature on the agreement would be contingent on City of Boise approval of the Syringa Valley applications.

Below is a tentative timeline illustrating the interim roadway construction, Phase 1 of the Kirsten Subdivision development, homebuilding, sales and occupancy by new home buyers. The schedule indicates that CBH would complete the base construction of its portion of the interim road from S. Cheyenne Ave. to Gowen Rd. in Fall 2017 in conjunction with the Phase 1 Kirsten Subdivision construction. Actual paving of the roadway extensions would be in Spring 2018 at the same time ACHD completes the S. Cole Rd. and W. Lake Hazel Rd. intersection and the NY Canal bridge crossing. Approximately a dozen homes might be occupied when the connection from S. Cole Rd. to Gowen Rd. is opened.
The planned extension of W. Lake Hazel Rd. and S. Orchard St. to Gowen Rd. is anticipated to have the following benefits:

- Provides a key transportation corridor in 2018 versus the originally programmed 2022-2026 time period
- Diverts traffic from S. Cole Rd.
- Offsets traffic impacts of new area growth including Syringa Valley
- Provides a relief route when S. Cole Rd. is widened from Victory Rd. to McGlochlin in 2020
- Postpones the need to widen S. Cole Rd. south of McGlochlin saving taxpayer dollars for other near-term priorities
- Provides an alternative transportation corridor that will reduce cut-through traffic on Hollilynn Dr.
- Brings a connection to Pleasant Valley Rd. and a future connection to the City's 275-acre industrial park at the Eisenman Interchange on Interstate 84 a significant step closer

15. Wildland-Urban Interface

Boise City Code Chapter 49 has designated certain areas within the Boise AOCI as Wildland-Urban Interface (WUI) Zones and contains regulations to minimize fire hazard. The zones primarily include the Boise Foothills (Area A) and the desert area of the southern tier of the Comprehensive Plan (Area B). Syringa Valley is located in Zone B.
The code requires that buildings and structures in WUI Zones A and B be constructed in accordance with the International Fire code, International Building Code, Boise City Code and Chapter 49 of the code. In Zone B, with the exception of regulations dealing with roof coverings and repair, Chapter 49 will only apply to outer perimeter structures abutting undeveloped property. All newly constructed structures will be protected by a defensible area of 30 feet from undeveloped land. Additionally, in a phased development, a 100-foot temporary defensible space will be required beyond the perimeter of the currently constructed phase.

16. Capital Improvement Program

CBH is the largest new home builder in the Treasure Valley and possesses the financial strength to undertake the planning, and development of Syringa Valley. Capital for the project will be a combination of debt and equity from CBH, investors and conventional financing. Additional capital will also come from the sale of selected portions of the project to other homebuilders and reimbursement/credit of CBH impact fees from ACHD for the construction of W. Lake Hazel Rd. and S. Orchard St.

Another financing option is provided by the Community Infrastructure District Statue (CID) that allows the creation of a separate taxing district for funding public infrastructure. A CID may be an additional financing tool to be considered at Syringa Valley. If utilized the taxing district would be created prior to the sale of the initial homes.

17. Kirsten Subdivision

Application SUB15-00055 for approval of the Kirsten Subdivision Preliminary Plat was submitted concurrently with application CPA15-00008 requesting a text amendment to the Blueprint Boise Comprehensive Plan to increase the gross density from 3 units/acre to 4.5 units/acre and increase the residential area from 65 acres to 100 acres north of W. Lake Hazel Rd.; and CAR15-00029 for rezoning the property from A-2 (Open Land, Reserve) to SP-03 (Syringa Valley Specific Plan). A discussion of the Kirsten Subdivision is included in the Specific Plan narrative as the subdivision illustrates how the community development principles will be implemented in the Low-Density Residential (LR) Sub- District.

The 101-acre subdivision is planned to include 452 units at a density of 4.42 units per gross acre, with 40 of the units included in a 4-plex residential product. Lot sizes for the single family detached homes will range from approximately 4,700 square feet to over 15,000 square feet. The diversity in lot sizes will allow for 5-6 distinct housing series with a mix of front and alley-
loaded designs. This product differentiation will deliver housing that will meet a broad range of consumer incomes, preferences and life stages.

The neighborhood also features well-distributed park space for both active and passive recreation. Four large parks ranging from 0.8 to 1.8 acres are close to all residents. The largest park will be the site of a 25x50 foot neighborhood pool with restrooms, changing rooms and a small community room. Other parks will offer tot lots and playgrounds, picnic and shade structures, and seating.

Connecting residents to the parks are 5-foot interior paved pathways and an 8-foot community paved pathway located in landscaped corridors 20-50 feet wide. The community pathway will link to a future system in the Lake Hazel South planning area. Residents will also have easy access to the 8-foot paved pathway along the NY canal and to the 10-foot pathway along the north side of W. Lake Hazel Rd. that will provide connections to commercial and school facilities.

The parks and pathways will offer very accessible recreation options for all ages that will promote health. This system and the neighborhood amenities will also provide a framework for social interaction.

The Kirsten subdivision will feature a grid road system that will also enhance connectivity. All sidewalks will be detached and located next to parkway strips planted with shade trees.
18. Zoning Ordinance

11-013-03 SYRINGA VALLEY

1. APPLICABILITY OF ORDINANCE

This Syringa Valley Specific Plan Zoning Ordinance applies to all property designated on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-013.9 below) in lieu of Chapter 11-04, Zoning Districts, except where noted herein. All remaining chapters of this Code still apply, except where noted herein. If any provision of this section conflicts with any provision of the Code, the provisions of this section shall control.

2. INTERPRETATION OF DISTRICTS

A. Sub-Districts Established

(1) Low-Density Residential (LR)
(2) Medium-Density Residential (MR)
(3) Village Center (VC)
(4) Commercial/Business Campus (CB)
(5) Industrial (IND)

B. District Boundaries

The location and boundaries of the Syringa Valley Specific Plan (SP-03) District are shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-013.9 below). The location and boundaries of the Syringa Valley Specific Plan Sub-Districts established herein are shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-013.9 below). Where any uncertainty exists as to the boundary of any such district, the following rules shall apply:

(1) Where any such boundary line is indicated as following a street, alley or public way, it shall be construed as following the centerline thereof.
(2) Where a boundary line is indicated as approximately following a lot line, such lot line shall be construed to be such boundary line.
(3) Where a boundary line divides a lot or crosses unsubdivided property, the location of such boundary shall be as indicated upon the Syringa Valley Zoning Map.

3. CONFORMITY REQUIRED

A. General

Except as otherwise provided herein, all land, buildings and premises in any Sub-District established herein shall be used only in accordance with the regulations established herein for that district. Additionally, no property shall be allowed to maintain an unattractive appearance or public nuisance as defined by this Code and/or state code at any time.

B. Purpose of the Low-Density Residential (LR) Sub-District

The purpose of the LR Sub-District is to provide for the development of diverse urban housing products at a density of ranging from 2 to 6 units per gross acre. The LR Sub-District north of W. Lake Hazel Rd. will have a maximum density of 4.5 units per gross acre, and south of W. Lake Hazel Rd. the overall density cannot exceed 6 units per gross acre. This Sub-District may include a variety of lot sizes. A variety of housing types may be included within a development, including attached units (townhouses, duplexes), detached units (patio homes single-family) and multi-family units, regardless of the district classification of the site, provided that the overall gross density is not exceeded as outlined above. Accessory dwelling units and uses are also allowed, along with community uses such as parks, community centers and recreational facilities.
C. Purpose of the Medium-Density (MR) Sub-District
The purpose of the MR Sub-District is to (a) accommodate medium-density residential uses at a density of 10-20 units per gross acre; (b) provide an orderly transition from more intensive, higher density uses to less intensive, lower density uses; and (c) allow limited cottages and quasi-residential uses, including senior housing and care facilities. The MR Sub-District includes flexibility in lot sizes and restrictions, and anticipates residential uses ranging from row houses and townhouses to condominiums and multi-story apartments. A range of civic and recreational facilities is allowed, along with office, medical and personal service commercial uses that are ancillary to senior housing and care facilities.

D. Purpose of the Village Center (VC) Sub-District
The purpose of the VC Sub-District is to provide a location for mixed-use, pedestrian-oriented development featuring retail, offices and restaurants in conjunction with residential uses. Residential uses will include a mix of housing types with densities up to 18 units per acre on a net parcel basis.

E. Purpose of the Commercial/Business Campus (CB) Sub-District
The purpose of the CB Sub-District is to accommodate business and professional office uses, and neighborhood and regional serving commercial uses such as large and small retailers, hotels, restaurants, and theaters together with necessary off-street parking facilities. Large office buildings are allowed in this area, along with service, lodging, and civic uses. The CB Sub-District will emphasize high quality design, pedestrian orientation, and flexible development standards.

F. Purpose of the Industrial (IND) Sub-District
The purpose of the IND Sub-District is to provide for a convenient employment center for manufacturing, research and development, warehousing, and distributing. The IND Sub-District is intended to encourage the development of industrial uses that are clean, quiet and free of hazardous or objectionable elements and that are operated, entirely, or almost entirely, within enclosed structures.

G. Residential District Standards
The following standards apply to the LR Sub-District and the MR Sub-District

(1) Minimum Property Size
(a) Each property shall be of sufficient size to meet the minimum setbacks as established in this section.
(b) Minimum property size shall be determined exclusive of land that is used for the conveyance of irrigation water and drainage, unless (a) the water is conveyed through pipe or tile; and (b) included as part of a utility easement that generally runs along the property lines.

(2) Minimum Street Frontage
(a) Properties with street frontages on a curve or at approximately a 90-degree angle shall be a minimum of 30 feet wide measured as a chord measurement.
(b) Street frontage for 2 properties sharing a common drive shall be a minimum of 15 feet for each property
(c) Street frontage for flag properties that do not share a common drive shall be a minimum of 30 feet wide.
H. **Allowed Uses**

Table 11-013.8 sets forth the allowed uses in each Sub-District established herein. Uses allowed by right are designated with an “A”, uses allowed by right, subject to administrative review are designated with an “A*”, and uses allowed with design review approval are designated with a “D”. Uses listed but not designated as allowed in Table 11-013.9 are prohibited. Uses not listed in Table 11-013.9 are allowed only upon a determination by the Planning Director that such uses are similar or compatible in nature to the allowed uses in Table 11-013.9. Any affected person may appeal such a determination of the Planning Director to the Planning and Zoning Commission within 10 calendar days following the date the decision is mailed in accordance with Chapter 11-03, Review and Decision Procedures.

### TABLE 11-013.9: Uses Allowed in Sub-Districts

<table>
<thead>
<tr>
<th>RESIDENTIAL</th>
<th>SP-03-LR</th>
<th>SP-03-MR</th>
<th>SP-03-VC</th>
<th>SP-03-CB</th>
<th>SP-03-IND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartment or Multiple Family Dwelling</td>
<td></td>
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<tr>
<td>Row House (Townhouse)</td>
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<td>A</td>
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<tr>
<td>Duplex House</td>
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<td>Single Family Residence or Cottage</td>
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<tr>
<td>Condominiums</td>
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<td></td>
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<tr>
<td>Home Occupation</td>
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<td>A*</td>
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<tr>
<td>Continuing Care Retirement Community</td>
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<tr>
<td>Assisted Living Apartment</td>
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<tr>
<td>Skilled Nursing Care Facility</td>
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<td>Memory Care Facility</td>
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<td>Accessory Dwelling Unit</td>
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<tr>
<td>Accessory Use</td>
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</tbody>
</table>

| LODGING                                        |          |          |          |          |          |
| Hotel (no room limit)                          |          |          |          |          |          |
| Hotel (up to 12 rooms)                         |          |          |          |          |          |
| Inn (up to 5 rooms)                            |          |          |          |          |          |
| Motel                                          |          |          |          |          |          |

<p>| OFFICE/RETAIL                                  |          |          |          |          |          |
| Office – Business, Professional, Medical        |          |          |          |          |          |
| Retail Store (convenience, clothing, video rental, sundries, pharmacy etc.) |          |          |          |          |          |
| Personal Service Store (dry cleaning, Laundromat, barber shop, etc.) | D | D | D | D | D |
| Service Station                                |          |          |          |          |          |
| Automobile Service                             |          |          |          |          |          |
| Lot, Automobile Sales                          |          |          |          |          |          |
| Drive-Up Window                                |          |          |          |          |          |
| Billboard                                      |          |          |          |          |          |
| Shopping Centers: Neighborhood or Community or Regional Commercial |          |          |          |          |          |
| Car Wash                                       |          |          |          |          |          |
| Grocery (up to 60,000 square feet)             |          |          |          |          |          |
| Bank                                           |          |          |          |          |          |
| Building Materials Supply                      |          |          |          |          |          |
| Wholesale Business                             |          |          |          |          |          |
| Restaurant, Café, Coffee Shop                  | D        | D        | D        | D        | D        |</p>
<table>
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<tr>
<th>Uses Allowed in Sub-Districts</th>
<th>SP-03-LR</th>
<th>SP-03-MR</th>
<th>SP-03-VC</th>
<th>SP-03-CB</th>
<th>SP-03-IND</th>
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<td>Tavern, Lounge</td>
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<tr>
<td>Liquor Store</td>
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<td>Temporary Sales Offices</td>
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<tr>
<td>Model Homes or Units</td>
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<tr>
<td>Health Club Facility</td>
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<tr>
<td>Spa/Resort</td>
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<tr>
<td>Nursery (retail or greenhouse)</td>
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<tr>
<td>CIVIC (PUBLIC AND PRIVATE)</td>
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<tr>
<td>Bus Shelter</td>
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<tr>
<td>Fountain or Public Art</td>
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<td>Theater</td>
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<td>Outdoor Auditorium</td>
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<tr>
<td>Conference Center</td>
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<td>Community Center</td>
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<td>Religious Institution</td>
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<td>Clubs, Lodges, Social Halls</td>
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<td>CIVIL SUPPORT</td>
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<td>Cemetery</td>
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<td>Funeral Home</td>
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<td>Hospital</td>
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<td>Medical Clinic (accessory use only in MR and CB)</td>
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<td>Rehabilitation Clinic</td>
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<td>Hospital, Large Animal or Small Animal</td>
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<td>EDUCATION</td>
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<td>Family Child Care Home (1-6 children)</td>
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<td>Group Child Care (7-12 children)</td>
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</tr>
<tr>
<td>Intermediate or Large Child Care Center (13+ children)</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>INDUSTRIAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy Industrial Facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>Light Industrial Facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>Agriculture</td>
<td>A*</td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Laboratory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
</tbody>
</table>
### TABLE 11-013.9: Uses Allowed in Sub-Districts

| Public Utility Facility – Minor | SP-03-LR | SP-03-MR | SP-03-VC | SP-03-CB | SP-03-IND |
| Wireless Communication Facility or Micro-Cell | D | D | D | D | D |
| Warehouse | D | D | D | D | D |
| Manufacturing Facility | D | D | D | D | D |
| Power Production Facility | D | D | D | D | D |
| Broadcasting Facility (e.g. TV, radio) or Micro-Cell | D | D | D | D | D |

### I. Lot and Structure Dimensions

Table 11-013.10 sets forth the lot, yard, density and structure height requirements for uses within each Sub-District established herein.

### TABLE 11-013.10: Lot and Structure Dimensions in Sub-Districts

<table>
<thead>
<tr>
<th>a. MAXIMUM DWELLING UNITS PER ACRE</th>
<th>SP-03-LR</th>
<th>SP-03-MR</th>
<th>SP-03-VC</th>
<th>SP-03-CB</th>
<th>SP-03-IND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attached Detached</td>
<td>6</td>
<td>20</td>
<td>18</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Interior Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Corner Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c. MIN. AVG. LOT WIDTH</td>
<td>Interior Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Corner Lot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d. MIN. STREET FRONTAGE (flag lot)</td>
<td>10/20</td>
<td>10/20</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Front Yard &amp; Side Yard Abutting Public St.</td>
<td>10°</td>
<td>10°</td>
<td>10°</td>
<td>10°</td>
<td>10°</td>
</tr>
<tr>
<td>Abutting public park</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Rear Yard</td>
<td>15°</td>
<td>15°</td>
<td>15°</td>
<td>15°</td>
<td>0/15°</td>
</tr>
<tr>
<td>Side Yard – Interior</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0/5°</td>
</tr>
<tr>
<td>f. MIN. PARKING LOT/SERVICE DR SETBACKS</td>
<td>Front Yard &amp; Side Yard Adj. to St.</td>
<td>15</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Rear Yard &amp; Side Yard – Interior</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>g. MAX. FLOOR AREA RATIO</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
J. Property Development Standards

Except as follows, the Property Development Standards for the Sub-Districts established herein shall be the same as those set forth in the Section 11-04-03 for residential uses and Sections 11-04-04 and 11-04-05 for office and commercial uses:

1. For attached single-family units, the minimum frontage requirement in Section 11-04-03 is reduced to 18 feet.
2. For lots with 0 feet frontage on a public right-of-way, drive aisles will provide access to the public street with perpetual ingress/egress or cross access easements recorded against the property. An owner’s association or other agreed-upon arrangement among the affected property owners will maintain the drive aisles in accordance with a recorded declaration or other agreements. The easements and declaration must be reviewed by the Boise City Attorney’s office at the time of preliminary plat approval to ensure the access and maintenance obligations of this paragraph are addressed. The Ada County Highway District must approve installation of any required street signs.
3. Buildings will be addressed to the public street from which the drive aisles extend.
4. Off-street parking and loading facilities shall be provided in accordance with Section 4 below.
5. The maximum number of residential units allowed within the Syringa Valley Specific Plan District is 2,500. To exceed this limit, the Syringa Valley Specific Plan Applicant must follow the rezone procedures of the Boise City Code to amend the Syringa Valley Zoning Ordinance. In so doing, the Applicant need not amend the entire Syringa Valley Specific Plan so long as the City finds that the revised limits are generally in accordance with the Syringa Valley Specific Plan.

K. Design Review

1. Applicability: Any of the uses listed as requiring Design Review, and any visible exterior improvements to a site, building or structure for any such use (including new facilities, remodeling, rehabilitation projects and expansion projects) within the Syringa Valley District shall require submittal of a Design Review Application and fee in accordance with Section 11-03-04.12 of the Boise Development Code, except where expressly modified herein.
2. Application Content: Any application to the City shall comply with Section 11-03-04.12 of the Boise City Code.
3. Level of Review: The Planning Director shall determine whether an application shall be processed at the administrative level or by the Design Review Committee ("Committee") level; provided, however, all applications for projects that have less than 5,000 square feet of gross building area and less than 20,000 square feet of site improvements shall be administratively reviewed by the Planning Director.
(4) Review and Findings: The Planning Director or Committee, as appropriate, shall review the application to determine whether the proposed application complies with the design review objectives, considerations and guidelines set forth in Sections 11-07-02 through 11-07-06 of the Boise City Code and the design criteria for the Syringa Valley District as set forth in the Syringa Valley Specific Pln. In the event of a conflict between such sections of the Boise City Code and design standards set forth in the Syringa Valley Specific Plan, the provisions of the Syringa Valley Specific Plan shall govern. Upon making such determination, the Planning Director or Committee shall issue its findings of fact, conclusions of law and conditions of approval. Any action of the Planning Director or the Committee may be appealed pursuant to Section 11-03-03.9 of the Boise City Code.

4. OFF-STREET PARKING AND LOADING REQUIREMENTS

In the LR, MR, VC, and CB Sub-Districts, off-street parking and loading facilities shall be provided in accordance with Section 11-07-03 of the Boise Development Code, except as noted herein. In the VC and CB Sub-Districts, off-street parking and loading facilities shall be provided in accordance with the Pedestrian Commercial Zoning District parking requirements in Section Error! Reference source not found., except as noted herein. In lieu of the off-street parking ratio requirements in Sections 11-07-03 and 11-07-06.6.2, non-residential uses in the MR, VC, and CB Sub-Districts must meet an overall parking density of 3.5 per 1000 square feet. Assisted living apartments, independent living residences within the Continuing Care Retirement Community, and similar uses shall be subject to the off-street parking requirements for “Housing for Elderly” uses listed in Section 11-07-03. Memory care facilities, skilled nursing care facilities, and similar uses shall be subject to the off-street parking requirements for “Nursing Home” uses listed in Section 11-07-03.

5. ADMINISTRATIVE PROVISIONS

A. Plat Approval Criteria

Development within the Syringa Valley Specific Plan District shall be subject to the subdivision and other related provisions of the Boise City Code, except that a neighborhood meeting shall not be required unless that plat proposes more than 240 dwelling units. Additionally, the City Council must find that each preliminary plat proposed and/or amended within the Syringa Valley Specific Plan District substantially conforms to the adopted Syringa Valley Specific Plan and complies with all applicable provisions of the Syringa Valley Specific Plan Zoning Ordinance. Plats must still proceed through the normal hearing process with review by the Planning and Zoning Commission and City Council.

B. Annexation into SP-03 Syringa Valley Specific Plan District

Any property owner or authorized representative may seek to reclassify their property for inclusion within the Syringa Valley Specific Plan District pursuant to Section 11-05-08 of the Boise Development Code.

C. Amendments

Any property owner within the Syringa Valley Specific Plan District may seek to amend the Syringa Valley Specific Plan Zoning Ordinance or the Syringa Valley Specific Plan pursuant to the Boise City Code provisions for zoning amendments.

D. Exceptions

(1) The Planning Director may grant exceptions to any setback, frontage, parking or height restriction up to 20 percent of the applicable limit and may grant exceptions to any use restrictions on a case by case basis.

(2) The Planning and Zoning Commission may grant exceptions to any setback, frontage, parking or height restriction greater than 20 percent of the applicable
Any approval pursuant to this section shall be supported by each of the following findings:
(a) The exception is consistent with the Syringa Valley Specific Plan; and
(b) The exception is justified based on unique circumstances of the proposed use or exceptional design features or the shape of the land.
(c) The exception would not cause undue adverse impacts on any other property.
(d) For any approval pursuant to subparagraph b, the exception meets the general conditional use criteria in the Boise Development Code.

Applications pursuant to this section shall include such information as the Planning Director determines is necessary to make the applicable findings in subparagraph c. Applications shall be processed in accordance with the procedures established in the Syringa Valley Specific Plan for Design Review.

The decision on any requested exception may be appealed pursuant to the appeal provisions of the Boise City Code.

E. Periodic Review
The Planning Director may perform a review of the implementation of the Syringa Valley Specific Plan not more frequently than every 1 year after approval of the first final plat. The review may address any matters the Planning Director deems appropriate regarding the progress of the development. Any modification of the Syringa Valley Specific Plan Zoning Ordinance may only occur after review by the Syringa Valley Specific Plan Applicant and the Planning Director and in compliance with the applicable Boise City Code sections for zoning amendments and Idaho Code Section 67-6511(d).

6. DEFINITIONS
The following definitions apply to this Section. If any conflict exists with definitions in other parts of the Code, the following definitions control.

A. Syringa Valley Specific Plan Zoning Ordinance
Section 0 of the Boise City Code or successor section specifically setting forth zoning regulations for the Syringa Valley Specific Plan District.

B. Syringa Valley Specific Plan
The Specific Plan adopted for the Syringa Valley Specific Plan District by the City of Boise on Month ??, 2016, as maintained in the official records of the City, including subsequent modifications.

C. Syringa Valley Specific Plan Applicant
Corey Barton Homes, Inc. d/b/a CBH Homes, or successor entities.

D. Syringa Valley Specific Plan District
The area designated as the SP-03 zone or successor designation on the City of Boise’s zoning map and as shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (attached as Figure 11-013.9).

E. Boise City Code
The code of the City of Boise. If the Boise City Code is amended, any reference to the Boise City Code in this Ordinance shall be deemed to refer to the applicable amended provision.
F. **Gross Acres**
For the purposes of calculating residential density (units per gross acre), gross acres shall be defined as the total area in the LR, MR and VC Sub-Districts less the area included in the rights of way for S. Cole Rd., W. Lake Hazel Rd., and S. Orchard St.; less the area of the New York Canal easement; less the area of the Kirsten Coughlin City park; and less the area of the public elementary school.

G. **Continuing Care Retirement Community**
A campus-style facility (multiple buildings on a single lot) that provides housing, personal services and health care, including nursing home care to people of retirement age. The community must provide a continuum of care to meet the needs of the individual residents, from independent living to assisted living to skilled nursing care and, possibly, memory care support. Meals, housekeeping, linens, 24-hour security and recreational services usually are provided. Each individual resident enters into a contract with the retirement community that defines the type of housing and services to be provided and the fees that will be charged.

H. **Memory Care Facility**
Same as Skilled Nursing Facility except the residents also receive care for some form of memory impairment.

I. **Skilled Nursing Facility**
A residential facility that provides 24-hour supervision by licensed nurses. The care usually is prescribed by a physician. Emphasis is on medical care, supplemented by physical, occupational, speech and other types of therapies. Personal care services, such as help with meals, bathing, dressing and grooming are also provided along with social services, religious services and recreational activities. A nursing facility offers care for individuals suffering from chronic diseases or conditions that do not require the constant attention of physicians. Services are provided that address the individuals' personal care and social-emotional needs.
Figure 11-013.9: Syringa Valley Overall Sub-Zoning Map
Formal Title / Summary

AN ORDINANCE (CAR15-00029 / COREY BARTON HOMES, INC.) ENACTING TITLE 11, CHAPTER 13, SECTION 3 OF THE BOISE CITY CODE TO CODIFY THE SYRINGA VALLEY SPECIFIC PLAN DISTRICT (SP-03) PROVISIONS PREVIOUSLY APPROVED BY BOISE CITY COUNCIL; ADOPTING THE SYRINGA VALLEY SPECIFIC PLAN APPROVED AS PART OF CAR15-00029; AMENDING TITLE 11, CHAPTER 5, TABLE 11-05.1 TO ADD REFERENCE TO SYRINGA VALLEY SPECIFIC PLAN DISTRICT; APPROVING AN ORDINANCE SUMMARY; AND ESTABLISHING AN EFFECTIVE DATE.

Formal Body

WHEREAS, the Boise City Council has previously approved the Syringa Valley Specific Plan, the creation of the Syringa Valley Specific Plan District, and the rezone from A-2 (Open Land) to SP-03 (Syringa Valley Specific Plan) for the property located in the district, as part of CAR15-00029 and pursuant to Boise City Code Section 11-05-08; and

WHEREAS, Blueprint Boise will be amended by resolution to update references accordingly.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF BOISE CITY, IDAHO:

Section 1. That Title 11, Chapter 13, Section 3 of the Boise City Code be hereby enacted to read as follows:

11-013-03 Syringa Valley
11-013-03 SYRINGA VALLEY
1. APPLICABILITY OF ORDINANCE
This Syringa Valley Specific Plan Zoning Ordinance applies to all property designated on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-013.9 below) in lieu of Chapter 11-04, Zoning Districts, except where noted herein. All remaining chapters of this Code still apply, except where noted herein. If any provision of this section conflicts with any provision of the Code, the provisions of this section shall control.

2. INTERPRETATION OF DISTRICTS
A. Sub-Districts Established
   (1) Low-Density Residential (LR)
   (2) Medium-Density Residential (MR)
   (3) Village Center (VC)
   (4) Commercial/Business Campus (CB)
   (5) Industrial (IND)

B. District Boundaries
The location and boundaries of the Syringa Valley Specific Plan (SP-03) District are shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-013.9 below). The location and boundaries of the Syringa Valley Specific Plan Sub-Districts established herein are shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (Figure 11-
Where any uncertainty exists as to the boundary of any such district, the following rules shall apply:

1. Where any such boundary line is indicated as following a street, alley or public way, it shall be construed as following the centerline thereof.
2. Where a boundary line is indicated as approximately following a lot line, such lot line shall be construed to be such boundary line.
3. Where a boundary line divides a lot or crosses unsubdivided property, the location of such boundary shall be as indicated upon the Syringa Valley Zoning Map.

3. CONFORMITY REQUIRED

A. General
Except as otherwise provided herein, all land, buildings and premises in any Sub-District established herein shall be used only in accordance with the regulations established herein for that district. Additionally, no property shall be allowed to maintain an unattractive appearance or public nuisance as defined by this Code and/or state code at any time.

B. Purpose of the Low-Density Residential (LR) Sub-District
The purpose of the LR Sub-District is to provide for the development of diverse urban housing products at a density of ranging from 2 to 6 units per gross acre. The LR Sub-District north of W. Lake Hazel Rd. will have a maximum density of 4.5 units per gross acre, and south of W. Lake Hazel Rd. the overall density cannot exceed 6 units per gross acre. This Sub-District may include a variety of lot sizes. A variety of housing types may be included within a development, including attached units (townhouses, duplexes), detached units (patio homes single-family) and multi-family units, regardless of the district classification of the site, provided that the overall gross density is not exceeded as outlined above. Accessory dwelling units and uses are also allowed, along with community uses such as parks, community centers and recreational facilities.

C. Purpose of the Medium-Density (MR) Sub-District
The purpose of the MR Sub-District is to (a) accommodate medium-density residential uses at a density of 10-20 units per gross acre; (b) provide an orderly transition from more intensive, higher density uses to less intensive, lower density uses; and (c) allow limited cottages and quasi-residential uses, including senior housing and care facilities. The MR Sub-District includes flexibility in lot sizes and restrictions, and anticipates residential uses ranging from row houses and townhouses to condominiums and multi-story apartments. A range of civic and recreational facilities is allowed, along with office, medical and personal service commercial uses that are ancillary to senior housing and care facilities.

D. Purpose of the Village Center (VC) Sub-District
The purpose of the VC Sub-District is to provide a location for mixed-use, pedestrian-oriented development featuring retail, offices and restaurants in conjunction with residential uses. Residential uses will include a mix of housing types with densities up to 18 units per acre on a net parcel basis.

E. Purpose of the Commercial/Business Campus (CB) Sub-District
The purpose of the CB Sub-District is to accommodate business and professional office uses, and neighborhood and regional serving commercial uses such as large and small retailers, hotels, restaurants, and theaters together with necessary off-street parking facilities. Large office buildings are allowed in this area, along with service, lodging, and
civic uses. The CB Sub-District will emphasize high quality design, pedestrian orientation, and flexible development standards.

F. Purpose of the Industrial (IND) Sub-District
The purpose of the IND Sub-District is to provide for a convenient employment center for manufacturing, research and development, warehousing, and distributing. The IND Sub-District is intended to encourage the development of industrial uses that are clean, quiet and free of hazardous or objectionable elements and that are operated, entirely, or almost entirely, within enclosed structures.

G. Residential District Standards
The following standards apply to the LR Sub-District and the MR Sub-District

(1) Minimum Property Size
   (a) Each property shall be of sufficient size to meet the minimum setbacks as established in this section.
   (b) Minimum property size shall be determined exclusive of land that is used for the conveyance of irrigation water and drainage, unless (a) the water is conveyed through pipe or tile; and (b) included as part of a utility easement that generally runs along the property lines.

(2) Minimum Street Frontage
   (a) Properties with street frontages on a curve or at approximately a 90-degree angle shall be a minimum of 30 feet wide measured as a chord measurement.
   (b) Street frontage for 2 properties sharing a common drive shall be a minimum of 15 feet for each property.
   (c) Street frontage for flag properties that do not share a common drive shall be a minimum of 30 feet wide.

H. Allowed Uses
Table 11-013.8 sets forth the allowed uses in each Sub-District established herein. Uses allowed by right are designated with an “A”, uses allowed by right, subject to administrative review are designated with an “A*”, and uses allowed with design review approval are designated with a “D”. Uses listed but not designated as allowed in Table 11-013.9 are prohibited. Uses not listed in Table 11-013.9 are allowed only upon a determination by the Planning Director that such uses are similar or compatible in nature to the allowed uses in Table 11-013.9. Any affected person may appeal such a determination of the Planning Director to the Planning and Zoning Commission within 10 calendar days following the date the decision is mailed in accordance with Chapter 11-03, Review and Decision Procedures.

<table>
<thead>
<tr>
<th>SP-03-LR</th>
<th>SP-03-MR</th>
<th>SP-03-VC</th>
<th>SP-03-CB</th>
<th>SP-03-IND</th>
</tr>
</thead>
</table>

<p>| TABLE 11-013.9: Uses Allowed in Sub-Districts |</p>
<table>
<thead>
<tr>
<th>TABLE 11-013.9: Uses Allowed in Sub-Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESIDENTIAL</strong></td>
</tr>
<tr>
<td>Apartment or Multiple Family Dwelling</td>
</tr>
<tr>
<td>Row House (Townhouse)</td>
</tr>
<tr>
<td>Duplex House</td>
</tr>
<tr>
<td>Single Family Residence or Cottage</td>
</tr>
<tr>
<td>Condominiums</td>
</tr>
<tr>
<td>Home Occupation</td>
</tr>
<tr>
<td>Continuing Care Retirement Community</td>
</tr>
<tr>
<td>Assisted Living Apartment</td>
</tr>
<tr>
<td>Skilled Nursing Care Facility</td>
</tr>
<tr>
<td>Memory Care Facility</td>
</tr>
<tr>
<td>Accessory Dwelling Unit</td>
</tr>
<tr>
<td>Accessory Use</td>
</tr>
<tr>
<td><strong>LODGING</strong></td>
</tr>
<tr>
<td>Hotel (no room limit)</td>
</tr>
<tr>
<td>Hotel (up to 12 rooms)</td>
</tr>
<tr>
<td>Inn (up to 5 rooms)</td>
</tr>
<tr>
<td>Motel</td>
</tr>
<tr>
<td><strong>OFFICE/RETAIL</strong></td>
</tr>
<tr>
<td>Office – Business, Professional, Medical</td>
</tr>
<tr>
<td>Retail Store (convenience, clothing, video</td>
</tr>
<tr>
<td>rental, sundries, pharmacy etc.)</td>
</tr>
<tr>
<td>Personal Service Store (dry cleaning,</td>
</tr>
<tr>
<td>Laundromat, barber shop, etc.)</td>
</tr>
<tr>
<td>Service Station</td>
</tr>
<tr>
<td>Automobile Service</td>
</tr>
<tr>
<td>Lot, Automobile Sales</td>
</tr>
<tr>
<td>Drive-Up Window</td>
</tr>
<tr>
<td>Billboard</td>
</tr>
<tr>
<td>Shopping Center: Neighborhood or Community</td>
</tr>
<tr>
<td>or Regional Commercial</td>
</tr>
<tr>
<td>Car Wash</td>
</tr>
<tr>
<td>Grocery (up to 60,000 square feet)</td>
</tr>
<tr>
<td>Bank</td>
</tr>
<tr>
<td>Building Materials Supply</td>
</tr>
<tr>
<td>Wholesale Business</td>
</tr>
<tr>
<td>Restaurant, Café, Coffee Shop</td>
</tr>
<tr>
<td>TABLE 11-013.9: Uses Allowed in Sub-Districts</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tavern, Lounge</td>
</tr>
<tr>
<td>Liquor Store</td>
</tr>
<tr>
<td>Model Homes or Units</td>
</tr>
<tr>
<td>Health Club Facility</td>
</tr>
<tr>
<td>Spa/Resort</td>
</tr>
<tr>
<td>Nursery (retail or greenhouse)</td>
</tr>
<tr>
<td><strong>CIVIC (PUBLIC AND PRIVATE)</strong></td>
</tr>
<tr>
<td>Bus Shelter</td>
</tr>
<tr>
<td>Fountain or Public Art</td>
</tr>
<tr>
<td>Library</td>
</tr>
<tr>
<td>Theater</td>
</tr>
<tr>
<td>Outdoor Auditorium</td>
</tr>
<tr>
<td>Park</td>
</tr>
<tr>
<td>Playground</td>
</tr>
<tr>
<td>Parking Lot - paid</td>
</tr>
<tr>
<td>Parking Structure</td>
</tr>
<tr>
<td>Conference Center</td>
</tr>
<tr>
<td>Community Center</td>
</tr>
<tr>
<td>Religious Institution</td>
</tr>
<tr>
<td>Clubs, Lodges, Social Halls</td>
</tr>
<tr>
<td>Private Open Space</td>
</tr>
<tr>
<td>Recreation Center</td>
</tr>
<tr>
<td>Outdoor Recreation Facility</td>
</tr>
<tr>
<td>Swimming Pool</td>
</tr>
<tr>
<td>Golf Course</td>
</tr>
<tr>
<td>Golf Driving Range</td>
</tr>
<tr>
<td><strong>CIVIL SUPPORT</strong></td>
</tr>
<tr>
<td>Fire Station</td>
</tr>
<tr>
<td>Police Station</td>
</tr>
<tr>
<td>Cemetery</td>
</tr>
<tr>
<td>Funeral Home</td>
</tr>
<tr>
<td>Hospital</td>
</tr>
<tr>
<td>Medical Clinic (accessory use only in MR and CB)</td>
</tr>
<tr>
<td>Rehabilitation Clinic</td>
</tr>
<tr>
<td>Hospital, Large Animal or Small Animal</td>
</tr>
<tr>
<td><strong>EDUCATION</strong></td>
</tr>
<tr>
<td>School (public, private or parochial)</td>
</tr>
<tr>
<td>School, Trade or Vocational</td>
</tr>
<tr>
<td>Family Child Care Home (1-6 children)</td>
</tr>
<tr>
<td>Group Child Care (7-12 children)</td>
</tr>
<tr>
<td>Intermediate or Large Child Care Center (13+ children)</td>
</tr>
<tr>
<td><strong>INDUSTRIAL</strong></td>
</tr>
<tr>
<td>Heavy Industrial Facility</td>
</tr>
<tr>
<td>Light Industrial Facility</td>
</tr>
<tr>
<td>Agriculture</td>
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<tr>
<td>TABLE 11-013.9: Uses Allowed in Sub-Districts</td>
</tr>
<tr>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Laboratory</td>
</tr>
<tr>
<td>Public Utility Facility – Minor</td>
</tr>
<tr>
<td>Public Utility Facility – Major</td>
</tr>
<tr>
<td>Mini-Storage</td>
</tr>
<tr>
<td>Warehouse</td>
</tr>
<tr>
<td>Manufacturing Facility</td>
</tr>
<tr>
<td>Power Production Facility</td>
</tr>
<tr>
<td>Broadcasting Facility (e.g. TV, radio) or Micro-Cell</td>
</tr>
</tbody>
</table>

I. Lot and Structure Dimensions

Table 11-013.10 sets forth the lot, yard, density and structure height requirements for uses within each Sub-District established herein.

<table>
<thead>
<tr>
<th>TABLE 11-013.10: Lot and Structure Dimensions in Sub-Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. MAXIMUM DWELLING UNITS PER ACRE</td>
</tr>
<tr>
<td>Attached Detached Attached Detached Attached Detached Attachet</td>
</tr>
<tr>
<td>Interior Lot</td>
</tr>
<tr>
<td>Corner Lot</td>
</tr>
<tr>
<td>c. MIN. AVG. LOT WIDTH</td>
</tr>
<tr>
<td>Interior Lot</td>
</tr>
<tr>
<td>Corner Lot</td>
</tr>
<tr>
<td>d. MIN. STREET FRONTAGE (flag lot)</td>
</tr>
<tr>
<td>e. MIN. BUILDING SETBACKS</td>
</tr>
<tr>
<td>Front Yard &amp; Side Yard – Abutting Public St.</td>
</tr>
<tr>
<td>Rear Yard</td>
</tr>
<tr>
<td>Side Yard – Interior</td>
</tr>
<tr>
<td>f. MIN. PARKING LOT/SERVICE DR SETBACKS</td>
</tr>
<tr>
<td>Front Yard &amp; Side Yard – Adj. to St.</td>
</tr>
<tr>
<td>Rear Yard &amp; Side Yard – Interior</td>
</tr>
</tbody>
</table>
J. Property Development Standards

Except as follows, the Property Development Standards for the Sub-Districts established herein shall be the same as those set forth in the Section 11-04-03 for residential uses and Sections 11-04-04 and 11-04-05 for office and commercial uses:

1. For attached single-family units, the minimum frontage requirement in Section 11-04-03 is reduced to 18 feet.
2. For lots with 0 feet frontage on a public right-of-way, drive aisles will provide access to the public street with perpetual ingress/egress or cross access easements recorded against the property. An owner’s association or other agreed upon arrangement among the affected property owners will maintain the drive aisles in accordance with a recorded declaration or other agreements. The easements and declaration must be reviewed by the Boise City Attorney’s office at the time of preliminary plat approval to ensure the access and maintenance obligations of this paragraph are addressed. The Ada County Highway District must approve installation of any required street signs. Buildings will be addressed to the public street from which the drive aisles extend. Addresses will be clearly delineated with appropriate monuments or signs.
3. Off-street parking and loading facilities shall be provided in accordance with Section 4 below.
4. The maximum number of residential units allowed within the Syringa Valley Specific Plan District is 2,500. To exceed this limit, the Syringa Valley Specific Plan Applicant must follow the rezone procedures of the Boise City Code to amend the Syringa Valley Zoning Ordinance. In so doing, the Applicant need not amend the entire Syringa Valley Specific Plan so long as the City finds that the revised limits are generally in accordance with the Syringa Valley Specific Plan.

K. Design Review

1. Applicability: Any of the uses listed as requiring Design Review, and any visible exterior improvements to a site, building or structure for any such use (including new facilities, remodeling, rehabilitation projects and expansion projects) within the Syringa Valley District shall require submittal of a Design Review Application and fee in accordance with Section 11-03-04.12 of the Boise Development Code, except where expressly modified herein.
2. Application Content: Any application to the City shall comply with Section 11-03-04.12 of the Boise City Code.
3. Level of Review: The Planning Director shall determine whether an application shall be processed at the administrative level or by the Design Review Committee.
(“Committee”) level; provided, however, all applications for projects that have less than 5,000 square feet of gross building area and less than 20,000 square feet of site improvements shall be administratively reviewed by the Planning Director.

(4) Review and Findings: The Planning Director or Committee, as appropriate, shall review the application to determine whether the proposed application complies with the design review objectives, considerations and guidelines set forth in Sections 11-07-02 through 11-07-06 of the Boise City Code and the design criteria for the Syringa Valley District as set forth in the Syringa Valley Specific Plan. In the event of a conflict between such sections of the Boise City Code and design standards set forth in the Syringa Valley Specific Plan, the provisions of the Syringa Valley Specific Plan shall govern. Upon making such determination, the Planning Director or Committee shall issue its findings of fact, conclusions of law and conditions of approval. Any action of the Planning Director or the Committee may be appealed pursuant to Section 11-03-03.9 of the Boise City Code.

4. OFF-STREET PARKING AND LOADING REQUIREMENTS
In the LR, MR, VC, and CB Sub-Districts, off-street parking and loading facilities shall be provided in accordance with Section 11-07-03 of the Boise Development Code, except as noted herein. In the VC and CB Sub-Districts, off-street parking and loading facilities shall be provided in accordance with the Pedestrian Commercial Zoning District parking requirements in Section 11-07-06.2., except as noted herein. In lieu of the off-street parking ratio requirements in Sections 11-07-03 and 11-07-06.6.2, non-residential uses in the MR, VC, and CB Sub-Districts must meet an overall parking density of 3.5 per 1000 square feet. Assisted living apartments, independent living residences within the Continuing Care Retirement Community, and similar uses shall be subject to the off-street parking requirements for “Housing for Elderly” uses listed in Section 11-07-03. Memory care facilities, skilled nursing care facilities, and similar uses shall be subject to the off-street parking requirements for “Nursing Home” uses listed in Section 11-07-03.

5. ADMINISTRATIVE PROVISIONS
A. Plat Approval Criteria
Development within the Syringa Valley Specific Plan District shall be subject to the subdivision and other related provisions of the Boise City Code, except that a neighborhood meeting shall not be required unless that plat proposes more than 240 dwelling units. Additionally, the City Council must find that each preliminary plat proposed and/or amended within the Syringa Valley Specific Plan District substantially conforms to the adopted Syringa Valley Specific Plan and complies with all applicable provisions of the Syringa Valley Specific Plan Zoning Ordinance. Plats must still proceed through the normal hearing process with review by the Planning and Zoning Commission and City Council.

B. Annexation into SP-03 Syringa Valley Specific Plan District
Any property owner or authorized representative may seek to reclassify their property for inclusion within the Syringa Valley Specific Plan District pursuant to Section 11-05-08 of the Boise Development Code.

C. Amendments
Any property owner within the Syringa Valley Specific Plan District may seek to amend the Syringa Valley Specific Plan Zoning Ordinance or the Syringa Valley Specific Plan pursuant to the Boise City Code provisions for zoning amendments.
D. Exceptions

(1) The Planning Director may grant exceptions to any setback, frontage, parking or height restriction up to 20 percent of the applicable limit and may grant exceptions to any use restrictions on a case by case basis.

(2) The Planning and Zoning Commission may grant exceptions to any setback, frontage, parking or height restriction greater than 20 percent of the applicable limit.

(3) Any approval pursuant to this section shall be supported by each of the following findings:

(a) The exception is consistent with the Syringa Valley Specific Plan; and
(b) The exception is justified based on unique circumstances of the proposed use or exceptional design features or the shape of the land.
(c) The exception would not cause undue adverse impacts on any other property.
(d) For any approval pursuant to subparagraph b, the exception meets the general conditional use criteria in the Boise Development Code.

(4) Applications pursuant to this section shall include such information as the Planning Director determines is necessary to make the applicable findings in subparagraph c. Applications shall be processed in accordance with the procedures established in the Syringa Valley Specific Plan for Design Review.

(5) The decision on any requested exception may be appealed pursuant to the appeal provisions of the Boise City Code.

E. Periodic Review

The Planning Director may perform a review of the implementation of the Syringa Valley Specific Plan not more frequently than every 1 year after approval of the first final plat. The review may address any matters the Planning Director deems appropriate regarding the progress of the development. Any modification of the Syringa Valley Specific Plan Zoning Ordinance may only occur after review by the Syringa Valley Specific Plan Applicant and the Planning Director and in compliance with the applicable Boise City Code sections for zoning amendments and Idaho Code Section 67-6511(d).

6. DEFINITIONS

The following definitions apply to this Section. If any conflict exists with definitions in other parts of the Code, the following definitions control.

A. Syringa Valley Specific Plan Zoning Ordinance

Section 0 of the Boise City Code or successor section specifically setting forth zoning regulations for the Syringa Valley Specific Plan District.

B. Syringa Valley Specific Plan

The Specific Plan adopted for the Syringa Valley Specific Plan District by the City of Boise on November 29, 2016, as maintained in the official records of the City, including subsequent modifications.

C. Syringa Valley Specific Plan Applicant

Corey Barton Homes, Inc. d/b/a CBH Homes, or successor entities.

D. Syringa Valley Specific Plan District
The area designated as the SP-03 zone or successor designation on the City of Boise’s zoning map and as shown on the Syringa Valley Specific Plan Overall Sub-Zoning Map (attached as Figure 11-013.9).

E. Boise City Code
The code of the City of Boise. If the Boise City Code is amended, any reference to the Boise City Code in this Ordinance shall be deemed to refer to the applicable amended provision.

F. Gross Acres
For the purposes of calculating residential density (units per gross acre), gross acres shall be defined as the total area in the LR, MR and VC Sub-Districts less the area included in the rights of way for S. Cole Rd., W. Lake Hazel Rd., and S. Orchard St.; less the area of the New York Canal easement; less the area of the Kirsten Coughlin City park; and less the area of the public elementary school.

G. Continuing Care Retirement Community
A campus-style facility (multiple buildings on a single lot) that provides housing, personal services and health care, including nursing home care to people of retirement age. The community must provide a continuum of care to meet the needs of the individual residents, from independent living to assisted living to skilled nursing care and, possibly, memory care support. Meals, housekeeping, linens, 24-hour security and recreational services usually are provided. Each individual resident enters into a contract with the retirement community that defines the type of housing and services to be provided and the fees that will be charged.

H. Memory Care Facility
Same as Skilled Nursing Facility except the residents also receive care for some form of memory impairment.

I. Skilled Nursing Facility
A residential facility that provides 24-hour supervision by licensed nurses. The care usually is prescribed by a physician. Emphasis is on medical care, supplemented by physical, occupational, speech and other types of therapies. Personal care services, such as help with meals, bathing, dressing and grooming are also provided along with social services, religious services and recreational activities. A nursing facility offers care for individuals suffering from chronic diseases or conditions that do not require the constant attention of physicians. Services are provided that address the individuals' personal care and social-emotional needs.
Section 2. That Title 11, Chapter 5, Table 11-05.1 of the Boise City Code shall be amended to read as follows:
Table 11-05.1: Overlay and Specific Plan Districts

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>District Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conservation Overlay Districts</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyde Park Conservation District</td>
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<tr>
<td></td>
<td>Near North End Conservation District</td>
</tr>
<tr>
<td><strong>Design Overlay Districts</strong></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Design Review Overlay District</td>
</tr>
<tr>
<td>HD</td>
<td>Historic Design Review Overlay District</td>
</tr>
<tr>
<td>DD</td>
<td>Downtown Design Review Overlay District</td>
</tr>
<tr>
<td>C</td>
<td>Capitol Boulevard Special Design District</td>
</tr>
<tr>
<td>EF</td>
<td>East Fairview Overlay District</td>
</tr>
<tr>
<td><strong>Neighborhood Overlay Districts</strong></td>
<td></td>
</tr>
<tr>
<td>BSN</td>
<td>Big Sky Neighborhood District</td>
</tr>
<tr>
<td>S</td>
<td>Sycamore Neighborhood District</td>
</tr>
<tr>
<td><strong>Parking Reduction Overlay Districts</strong></td>
<td></td>
</tr>
<tr>
<td>P-1</td>
<td>Central Downtown Parking District</td>
</tr>
<tr>
<td>P-2</td>
<td>River-Myrtle Parking District</td>
</tr>
<tr>
<td>P-3</td>
<td>South Downtown Parking District</td>
</tr>
<tr>
<td><strong>Waterways Overlay Districts</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boise River System Overlay District</td>
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<tr>
<td></td>
<td>Flood Protection Overlay District</td>
</tr>
<tr>
<td><strong>Specific Plan Districts</strong></td>
<td></td>
</tr>
<tr>
<td>SP-1</td>
<td>Harris Ranch Specific Plan District</td>
</tr>
<tr>
<td>SP-2</td>
<td>Barber Valley Specific Plan District</td>
</tr>
<tr>
<td>SP-3</td>
<td>Syringa Valley Specific Plan District</td>
</tr>
</tbody>
</table>

Section 3. That the Syringa Valley Specific Plan, attached and incorporated herein, is hereby adopted.

Section 4. That the summary of this ordinance, attached hereto as Exhibit “B”, is approved as to form and content.

Section 5: That following passage, approval, and publication, this ordinance may be visually reformatted administratively in order to ensure a consistent and correct appearance.

Section 6. That this ordinance shall be in full force and effect from and after its passage, approval and publication.