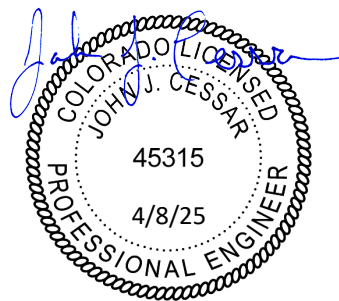


FINAL CONTRACT DOCUMENTS

1V6 Automated Weather Observing System (AWOS) Replacement

CDOT Project No. 25-1V6-02-C
FAA Project No: 3-08-0009-025-2025
Dibble Project No: 1325004

Prepared For:
Fremont County Airport



April 8, 2025

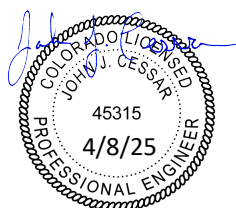


DATE, TIME, AND LOCATION OF SUBMITTING OF BIDS: Bids must be submitted via Fremont County Bid Request Portal ([Bid Request Portal | Fremont County, Colorado](#)) **before Wednesday, May 7, 2025, at 2pm (MT)** for furnishing all necessary labor, plant, equipment, materials; and performing all work for constructing the **1V6 AWOS Replacement** project. Any bid received after the established closing time shall be returned unopened. Fremont County reserves the right to accept or reject any or all bids and waive any informality deemed in the best interest of County, and to reject the bids of any persons who have been delinquent, unfaithful, or unclear to any contract with Fremont County.

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Fremont County Airport
1V6 AWOS Replacement

SPECIAL NOTICE TO BIDDERS

Each Bidder shall submit the complete, intact PROPOSAL FORMS, CONTRACT DOCUMENTS AND SPECIFICATIONS booklet with the Bid Bonds or Certified Cashier's Checks attached for the **1V6 AWOS Replacement** project as directed within these Contract Documents. Bidders shall complete all blanks in the Proposal Forms and sign the Proposal in the space(s) indicated.

At the time of solicitation of this bid, Fremont County is aware of Executive Order Ending Radical and Wasteful Government DEI Programs and Preferencing signed on January 20, 2025, and Executive Order Ending Illegal Discrimination and Restoring Merit-Based Opportunity signed on January 21, 2025. It is the intent of Fremont County to comply with federal and state law regarding awarding of contracts and not to impose additional obligations not required under the enforceable terms and conditions of the federal and state grants providing funding for this project. To the extent that any provisions, requirements and recitations contained in these bid solicitation documents are inconsistent with the Executive Orders signed on January 20, 2025 and January 21, 2025 referenced in this paragraph, related assurances and compliance verification will not be required.

Each Bidder must complete, sign, and submit the following Fremont County documents with their bid to be considered a responsive, responsible, qualified and acceptable bid, at the time the bid documents are due:

- | | |
|--|--|
| a. Non-Collusion Affidavit | h. Pre-Qualification Form |
| b. Completed Bid Proposal - Schedule of Bid Items | i. Contractor Questionnaire |
| c. Bid Bond (5%) | j. Authorized Signature Form |
| d. Attachment A – List of Subcontractors & DBE Utilization | k. Certificate of Insurability |
| e. Attachment B - Letter of Intent to Perform as DBE Subcontractor | l. Acknowledgement of any and all Addenda |
| f. Attachment C - Identification Statement for DBE | m. Buy American Certification (Div. III – Section A4) |
| g. Attachment D - Demonstration of Good Faith Efforts | n. Tax Delinquency & Felony Convictions Certification (Div. III – Section A24) |

The complete set of Plans, Specifications, and Contract Documents can be downloaded from *Rocky Mountain E-Purchasing System* (www.bidnetdirect.com/colorado), beginning on **Wednesday, April 16, 2025**. To view all planholder documents (contract documents, plans and addendums) you must register on *Rocky Mountain E-Purchasing*. There is an option for free registration. It is the planholder's responsibility to ensure they have all addenda prior to submission of bid. Failure to acknowledge receipt of any addenda applicable to this project could result in the rejection of your bid.

There will be a **Non-Mandatory Pre-Bid Meeting on Wednesday, April 23, 2025, at 10 am (MT)** at the Fremont County Airport Terminal Building located at 60298 US Highway 50 E, Penrose, CO 81240. There will also be a conference call-in option for those that cannot attend in person. The call-in information is provided below:

Pre-Bid Microsoft Teams Meeting Information:
Phone (Audio Only)

Dial-In by Phone: +1 480 378 0989
Conference ID: 127 572 787#



Microsoft Teams (Virtual Access)

Web Address: <https://www.microsoft.com/en-us/microsoft-teams/join-a-meeting>

Meeting ID: 272 754 730 909

Passcode: YQ6sg3Vy

Project site visits may be made available upon request with a minimum three-day notice. For all those that wish to visit the site must contact Wes Brandt via email at wes.brandt@fremontco.com.

All questions relating to interpretation of the Contract Documents or products must be submitted in via the *Rocky Mountain E-Purchasing System*, (www.bidnetdirect.com/colorado), prior to **Monday, April 28, 2025, at 3 pm (MT)**. Any questions received after **Monday, April 28, 2025, at 3 pm (MT)** may not be answered. Responses to the questions will be issued in the form of an addenda to the documents. A Final Addendum will be posted via the *Rocky Mountain E-Purchasing System*, www.bidnetdirect.com/colorado on **Thursday, May 1, 2025**. It is the full responsibility of any bidder wishing to submit a bid to obtain and acknowledge any and all addenda.



Fremont County Airport
1V6 AWOS Replacement

NOTICE OF INVITATION TO BID

PROJECT: 1V6 AWOS Replacement

DESCRIPTION: This project includes the replacement of the existing AWOS system with a new AWOS III PT system. Major work items include:

- Installation of new AWOS foundations
- Installation of new AWOS wind sensor tower
- Installation of new AWOS electrical infrastructure
- Installation of new AWOS III P/T array
- Installation of new wireless radio kit in Terminal Building
- Commissioning of the new system with FAA Inspector

PRE-BID MEETING: There will be a **Non-Mandatory Pre-Bid Meeting** on **Wednesday, April 23, 2025, at 10 am (MT)** at the Fremont County Airport Terminal Building located at 60298 US Highway 50 E, Penrose, CO 81240. There will also be a conference call in option for those that cannot attend in person. The call-in information is provided below:

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Microsoft Teams (Virtual Access)

Web Address: <https://www.microsoft.com/en-us/microsoft-teams/join-a-meeting>

Meeting ID: 272 754 730 909

Passcode: YQ6sg3Vy

BID SUBMISSION DEADLINE: **Wednesday, May 7, 2025, at 2pm (MT)**

Bids must be submitted via the Fremont County Bid Request Portal ([Bid Request Portal | Fremont County, Colorado](#)) by **Wednesday, May 7, 2025, at 2pm (MT)** for furnishing all necessary labor, plant, equipment, materials, and performing all work for constructing the **1V6 AWOS Replacement** project.

Any bid received after the established closing time shall be returned unopened. The Owner reserves the right to accept or reject any or all bids and waive any informality deemed in the best interest of the Owner, and to reject the bids of any persons who have been delinquent, unfaithful, or unclear to any contract with Fremont County.

The complete set of Plans, Specifications, and Contract Documents can be downloaded from *Rocky Mountain E-Purchasing System* (www.bidnetdirect.com/colorado), beginning on **Wednesday, April 16, 2025**. To view all planholder documents (contract documents, plans and addendums) you must register on *Rocky Mountain E-Purchasing*. There is an option for free registration. All questions relating to interpretation of the Contract Documents or products must be submitted in via the *Rocky Mountain E-Purchasing System*, (www.bidnetdirect.com/colorado), prior to **Monday, April 28, 2025, at 3 pm (MT)**. Any questions received after **Monday, April 28, 2025, at 3 pm (MT)** may not be answered. Responses to the questions will be issued in the form of an addenda to the documents. It is the planholder's responsibility to ensure they have all addenda prior to submission of bid. Failure to acknowledge receipt of any addenda applicable to this project could result in the rejection of your bid.

Note: Once the County has had the opportunity to thoroughly evaluate the bids, the Bid Result Tabulation will be uploaded to and be available from *Rocky Mountain E-Purchasing System* (www.bidnetdirect.com/colorado).



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Fremont County Airport 1V6 AWOS Replacement

INSTRUCTIONS TO BIDDERS

1. Each proposal shall be legibly written, printed in ink, or typed on the proposal form provided in this bound copy of proposed Contract Documents. No alterations in proposals, or in the printed forms therefore, by erasures, interpolations, or otherwise will be acceptable unless each such alteration is signed or initialed by the bidder; if initialed, the Owner may require the bidder to identify any alteration so initialed. No alteration in any bid, or in the bid form on which it is submitted, shall be made by the person after the bid has been submitted by the bidder. Any and all addenda to the Contract Documents on which a bid is based, properly signed by the bidder, shall accompany the proposal when submitted.

Each proposal submitted for constructing the aforementioned project shall be submitted electronically via Fremont County Bid Request Portal ([Bid Request Portal | Fremont County, Colorado](#)).

All Bids must be received on or before the time and date specified in the *Notice of Invitation of Bid*.

All bids will be reviewed and evaluated by the Owner and the Engineer. Once the Owner has had the opportunity to thoroughly evaluate the bids, the Bid Result Tabulation will be uploaded to and be available on the Rocky Mountain E-Purchasing System (www.bidnetdirect.com/colorado). The Owner will determine the lowest responsive and responsible bid after considering the recommendations of the Engineer. The Owner will enter into a contract with the Contractor.

Bids may be held by the Owner(s) for a period not to exceed **One Hundred Twenty (120) Calendar Days** from the date of the opening of bids for the purpose of reviewing the bids prior to awarding of the Contract.

2. A bid bond for the **1V6 AWOS Replacement** project shall be required at the time the bid is submitted. Each bid shall be accompanied by either a certified check or a cashier's check drawn on an acceptable bank or a bid bond, using the form provided in the Contract Documents, in an amount of not less than **five percent (5%)** of the amount of the Bid Amount, made payable without conditions to "Fremont County," hereinafter referred to as the Owner. The amount of the said Bid Guarantee may be retained by and forfeited to the Owner as liquidated damages if the bid covered thereby is accepted and a contract based thereon is awarded and the bidder should fail to enter into a Contract in the form prescribed, with legally responsible sureties, within 15 Working Days after such award is made by the Owner.

The bid guarantee deposit(s) of the bidder will be returned if and when his bid is rejected. The bid guarantee deposit(s) of the bidder to whom a contract is awarded will be returned when said successful bidder executes a contract and files satisfactory bonds as hereinafter stipulated. The bid guarantee deposit of the second lowest responsible bidder may be retained for a period not to exceed **One Hundred Twenty (120) Calendar Days** pending the execution of the contract and bonds by the successful bidder.

3. Each bidder shall carefully examine the Plans, Specifications, and all other Contract Documents, shall visit the site and fully inform himself of all conditions affecting the work or the cost thereof, and shall be presumed to have done so and his bid shall be based upon his own conclusion from such examination and his own interpretation of reports on borings and upon his own conclusions with reference to surface and sub-surface materials and conditions. Each bidder shall inform himself concerning all State and Local laws, ordinances or regulations which may in any manner affect his proposed operations of construction, or those engaged or employed on the work or the material or equipment.

If any person contemplating a bid for the proposed contract is in doubt as to the true meaning of any part of the Plans, Project Specifications or other proposed Contract Documents, or finds discrepancies in or omissions from the Plans, Project Specifications and Contract Documents, he may submit to the Engineer a written request via the *Rocky Mountain E-Purchasing System*, (www.bidnetdirect.com/colorado), for

the interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Questions received after the date noted in the *Special Notice to Bidders* may not be answered. Any interpretation or correction of the proposed Documents will be made only by Addendum, duly issued, and a copy of such Addendum will be posted via *Rocky Mountain E-Purchasing System*. Any addenda issued during the time of bidding, forming a part of the Contract Documents received by the bidder for the preparation of his bid, shall be covered in the bid and shall be made a part of the contract. The Owner will not be responsible for any other explanation or interpretations of the proposed documents.

4. Each Bidder to whom a Contract for the work is awarded shall be required to furnish Performance and Payment Bonds in accordance with Division I contract requirements.
5. All sales and use taxes, as well as other taxes that might lawfully be assessed against the Owner(s) in the execution and performance of the proposed Contract and work covered thereby, are to be paid by the Contractor for the work from monies obtained in satisfaction of his Contract. It is to be understood by all bidders that the bid price or prices submitted shall include the total cost of all such taxes.
6. No bidder may submit more than one bid for each project, except as provided in these Instructions. Two bids under different names will not be received from one firm or association.
7. No bidder may withdraw his bid for a period of **One Hundred Twenty (120) Calendar Days** after the date and hour set for the opening herewith. A bidder may withdraw his bid at any time prior to the expiration of the period during which bids may be submitted, by written request of the same person or persons who signed the bid.
8. The Owner reserves the right to accept the bid which, in its judgment, is the lowest and most responsive, responsible, and qualified bid; to reject any or all bids; and to waive or accept irregularities or informalities in any bid submitted. Bids received after the specified time of closing will be returned unopened.

In reviewing bids and/or proposals and/or estimates, and determining whether or not a proposed contractor or vendor is the most responsive, responsible, and qualified bidder, the Owner(s) shall consider, among other factors (not limited to):

- a. costs incurred by the County or other governmental entities in contested change orders by the Contractor;
- b. litigation in which the Contractor was involved with the County or other governmental entities relative to contract performance;
- c. failure of the Contractor to have met bid specifications or time limits in previous contracts;
- d. abandonment of a contract or refusal to perform without legal cause after submission of a bid;
- e. a record of bidding errors or omissions in two or more bid submissions in a thirty-six month period;
- f. a record of failure to perform or unsatisfactory performance of two or more contracts within a thirty-six month period;
- g. inadequate equipment, lack of expertise or insufficient personnel to complete the proposed contract;
- h. a record of safety violations in two or more contracts within a thirty-six month period;
- i. conviction of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract within a ten-year period;
- j. conviction or a criminal offense within a ten-year period of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property or any other offense indicating a lack of business integrity or business honesty which might affect responsibility as a municipal contractor;
- k. conviction of state or federal antitrust statutes within a ten-year period arising out of the submission of bids or proposals;

- l. any other cause that the County determines to be so serious and compelling as to affect responsibility as a public works contractor, including debarment or similar proceedings by another governmental entity.
10. Each bidder shall sign his bid for each project, using his usual signature and giving his full business address. Bids by partnerships shall be signed with the partnership or by an authorized representative and designation of the person signing. Bids by corporations shall be signed with the name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind it in the matter. The names of all persons signing should also be typed or printed below the signature. A bid by a person who affixes to his signature the word “president,” “secretary,” “agent,” or other designation, without disclosing his principal, may be held to be the bid of the individual signing. When represented by the Owner(s), satisfactory evidence of the authority of the officer signing on behalf of a corporation shall be furnished.
11. No assignment by the Contractor of any contract to be entered into hereunder, or any part thereof, or of funds to be received thereunder by the Contractor, will be recognized by the Owner(s) unless such assignment has had prior approval of the Owner(s) and the Surety has been given due notice of such assignment in writing and has consented thereto in writing.
12. Liquidated Damages for the **1V6 AWOS Replacement** project are outlined in the *Contract Agreement* document and the *Federal General Provisions*.
13. Partial Payments will be made monthly.
14. Final Payment will not be made until all “*Unconditional Waiver and Release on Final Payment*” documents have been properly executed and received, individually and respectively for each project.
15. Notwithstanding the specifications contained herein, it is the responsibility of the bidder/proposer to insure that the bid is in conformance with all federal, state, county and city rules and regulations, including but not limited to the International Building Code, International Code for Building Conservation, International Fire Code, International Housing Code, International Mechanical Code, International Plumbing Code, and International Electric Code, as the foregoing have been adopted by Fremont County, together with any amendments thereto.
16. At the time of solicitation of this bid, Fremont County is aware of Executive Order Ending Radical and Wasteful Government DEI Programs and Preferencing signed on January 20, 2025, and Executive Order Ending Illegal Discrimination and Restoring Merit-Based Opportunity signed on January 21, 2025. It is the intent of Fremont County to comply with federal and state law regarding awarding of contracts and not to impose additional obligations not required under the enforceable terms and conditions of the federal and state grants providing funding for this project. To the extent that any provisions, requirements and recitations contained in these bid solicitation documents are inconsistent with the Executive Orders signed on January 20, 2025, and January 21, 2025, referenced in this paragraph, related assurances and compliance verification will not be required.



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Fremont County Airport
1V6 AWOS Replacement

NON-COLLUSION AFFIDAVIT

I certify that this bid is genuine and is not in any way collusive or sham; that the bid is not with the intent to restrict or prohibit competition; that this firm has not revealed the contents of the bid to, or in any way colluded with, any other firm which may compete for the contract; and that no other firm which may compete for the contract has revealed the contents of a bid to, or in any way colluded with, this firm.

Name of Firm Submitting Bid: _____

Address: _____

Telephone Number: _____

Name (Type or Print)

Signature

Title (Type or Print)

Date

Failure to submit this affidavit signed at the time of bid opening is grounds for disqualification of the bid.



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DIVISION I

FREMONT COUNTY BIDDING REQUIREMENTS AND AGREEMENT DOCUMENTS

Fremont County Airport 1V6 AWOS Replacement

BID PROPOSAL

1. The Undersigned Bidder declares that he has read the *Special Provisions, Federal General Provisions, Federal Technical Specifications* and all other Contract Documents, has examined and understands the plans, has examined the site of the work and has determined for himself the conditions affecting the work, and he proposes and agrees if this proposal is accepted, to provide at his own expense, all labor, insurance, superintendence, machinery, plant, equipment, tools, apparatus, appliances, and means of construction, and all materials and supplies and to complete, ready for its intended purpose, the entire work and all parts thereof described as included under the contract herein bid upon, in the manner and items prescribed, including all work incidental thereto, according to the plans and contract documents (including the Technical Specifications) and such instructions as the Owner(s)'s authorized agent may give.
2. The Undersigned Bidder, in compliance with the Notice of Invitation to Bid hereby proposes to do the work called for in said specifications and other contract documents and shown on said plans for the said work at the rates and prices on the Bid Schedule on pages **B-5 – B-7**.
3. Proposal Quantities: It is expressly understood and agreed by the parties hereto that the bid quantities of the various classes of work to be done and material to be furnished under this Contract, which have been estimated as stated in the Bid, are only approximate and are to be used SOLELY for the purpose of comparing, on a consistent basis, the bids offered for the work under this Contract; and the Contractor further agrees that the Owner(s) will not be held responsible if any of the quantities shall be found incorrect; and the Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or misstatement is found to occur in the estimated quantities, the same shall not invalidate this Contract or release the Contractor from the execution and completion of the whole or any part of the work in accordance with the Project Specifications and Contract Documents and the Plans herein mentioned, or for the prices herein agreed upon and fixed therefore, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation except as may be provided for in this Contract.
4. The undersigned agrees, upon written notice of the acceptance of this bid, within **One Hundred Twenty (120) Calendar Days** after the opening of the bids, that he will execute the Contract in accordance with the bid as accepted and give contract (Performance and Payment) Bonds for both projects individually and respectively, within fifteen (15) days after the Contract is presented for signature.
5. The undersigned further agrees that if awarded the Contract, he will commence work within **Seven (7) calendar days** after receipt of Notice to Proceed. The equipment will be required to be on-site at the airport and all the work within the contract must be completed and fully functional within **Forty-two (42) Calendar Days**, (excluding any potential stop time for scheduling FAA Inspection/Commissioning, reference the construction phasing information in the plans), after beginning construction.

The undersigned further agrees that he shall pay liquidated damages in accordance with Division I - *Contract Agreement* for the **1V6 AWOS Replacement** project, if work remains uncompleted after expiration of the contract time.

6. As an evidence of good faith in submitting this proposal, the undersigned encloses a certified check, cashier's check or bid bond in the amount not less than the amount stated in the *Notice of Invitation to Bid*, which, in case he refuses or fails to accept an award and to enter into a contract and file the required bonds within the prescribed time, shall be forfeited to the Owner, as liquidated damages.
7. The undersigned hereby declares that the only parties interested in this bid are named herein, that this proposal is made without collusion with any other person, firm or corporation, that no employee of The Owner, officer or agent, is directly or indirectly financially interested in this bid.
8. The undersigned hereby acknowledges receipt of the following Addenda:

Addendum No. _____
Addendum No. _____
Addendum No. _____

and that the Addenda were considered in the preparation of this Proposal.

9. The undersigned has checked carefully all the figures in the Bid Schedule and understands that the Owner(s) will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.
10. The undersigned understands that the Owner(s) reserve the right to reject any or all bids or to waive any informalities in the bid.
11. The undersigned hereby assures that he will make a good faith effort, as defined in Appendix A of 49 CFR Part 26, Regulations of the Office of the Secretary of Transportation, to subcontract a minimum of **0.06%** of the dollar value of the prime contract to business concerns owned and controlled by socially and economically disadvantaged individuals (DBE). All Bidders are required to complete the following DBE forms (at the time of bid):
 - Attachment A - List of Subcontractors and DBE Utilization
 - Attachment B - Letter of Intent to Perform as DBE Subcontractor
 - Attachment C - Identification Statement for DBE
 - Attachment D - Demonstration of Good Faith Efforts
12. All Bidders shall report the names, addresses, DBE/SBE status of each Subcontractor anticipated to be used on the project (if applicable), including contact information and the bid amount of all subcontractors for the proposed work on the Subcontractors List. All bidders are directed to Division V – *Federal General Provisions*, Section 80.01 for the requirement of self-performance that must be demonstrated at the time of bid (50% self-performance).
13. At the time of solicitation of this bid, Fremont County is aware of Executive Order Ending Radical and Wasteful Government DEI Programs and Preferencing signed on January 20, 2025, and Executive Order Ending Illegal Discrimination and Restoring Merit-Based Opportunity signed on January 21, 2025. It is the intent of Fremont County to comply with federal and state law regarding awarding of contracts and not to impose additional obligations not required under the enforceable terms and conditions of the federal and state grants providing funding for this project. To the extent that any provisions, requirements and recitations contained in these bid solicitation documents are inconsistent with the Executive Orders signed on January 20, 2025, and January 21, 2025, referenced in this paragraph, related assurances and compliance verification will not be required.



BIDDER DATA:

Name of Bidder _____

Type of Organization _____

Person(s) authorized to Sign for Bidder _____

Address _____

Phone _____

Type & Number
Contractor's License _____

Dated in _____, this _____ day of _____, 20____.

SIGNATURE OF BIDDER

If an Individual: _____, doing business

as _____

If a Partnership: _____

by _____

If a Corporation: _____

by _____

Title _____ (Seal)



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BID SCHEDULE

CONTRACTOR NAME: _____

1V6 AWOS Replacement							
LINE NO.	ITEM NO.	DESCRIPTION		APPROX. QTY.	UNIT	UNIT PRICE	AMOUNT
1	C-105-6.1	Mobilization	at the unit price of _____ dollars and _____ cents.	1	LS		
2	T-901-5.1	Seeding with Hydromulch	at the unit price of _____ dollars and _____ cents.	1	AC		
3	T-901-5.2	Landscape Stone with Herbicide & Plastic Sheeting (DET 1, SHT C1.1)	at the unit price of _____ dollars and _____ cents.	2,500	SF		
4	L-100-5.1	Remove Existing AWOS Equipment, Tower, Electrical Sub-panel, and Cables. Excavate and Remove Tower Foundation. Existing Grounding to Remain - Protect in Place	at the unit price of _____ dollars and _____ cents.	1	LS		
5	L-100-5.2	New 30Amp, Single Phase, 12-Circuit Sub-panel, 100A Rated, NEMA 3R with Branch Circuit Breakers Complete	at the unit price of _____ dollars and _____ cents.	1	LS		
6	L-100-5.3	New Strut Rack for AWOS Step-Down Transformer and Disconnect. Provide New Transformer Ground if Required. Remove Existing Wood Pole.	at the unit price of _____ dollars and _____ cents.	1	EA		
7	L-100-5.4	Electrical Vault Upgrades Including Installation of New Circuit Breaker, Removal of AWOS Contactor, and All Associated Wiring, Complete	at the unit price of _____ dollars and _____ cents.	1	LS		
8	L-108-5.1	2 - #12 AWG, #12 Ground (Sensor & Obstruction Light Power)	at the unit price of _____ dollars and _____ cents.	200	LF		
9	L-108-5.2	2 - #10 AWG, #10 Neutral, #10 Ground (Sub-panel Feeder)	at the unit price of _____ dollars and _____ cents.	75	LF		
10	L-110-5.1	1-1" PVC, Direct Buried (If Required)	at the unit price of _____ dollars and _____ cents.	40	LF		
11	L-110-5.2	1-3/4" PVC, Direct Buried (If Required)	at the unit price of _____ dollars and _____ cents.	20	LF		

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CONTRACTOR NAME: _____

1V6 AWOS Replacement

1V6 AWOS Replacement							
LINE NO.	ITEM NO.	DESCRIPTION		APPROX. QTY.	UNIT	UNIT PRICE	AMOUNT
12	L-AWOS-6.1	New AWOS III P/T, Site Preparation - Sensors and Tower Foundations, Masts, Power and Communication Conduits, Enclosures and Cables, Installed and Commissioned, Per Manufacturer Requirements Complete	at the unit price of _____ dollars and _____ cents.	1	LS		
13	L-AWOS-6.2	New AWOS Tower on New Concrete Foundation, Adjusted to 1" Minimum Above Finished Grade Complete	at the unit price of _____ dollars and _____ cents.	1	LS		
14	L-AWOS-6.3	New L-810(L) LED Dual Obstruction Light, Installed on New AWOS Tower Complete	at the unit price of _____ dollars and _____ cents.	1	EA		
15	L-AWOS-6.4	Install New CDP, UHF Wireless Radio Kit, Antenna and Required Cables in Terminal Building, Tested and Commissioned Complete Per Manufacturer Requirements	at the unit price of _____ dollars and _____ cents.	1	LS		
16	Total Amount, Items 1 Thru 15 Inclusive					\$	
_____/100 Dollars							
Written Words							

NOTE TO BIDDERS: All unit prices and bid totals of extended prices include all applicable taxes, delivery, and freight charges. Bidders are required to fill in all blank spaces with an entry. Bids submitted with blank spaces shall be considered "non-responsive."



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Fremont County Airport
1V6 AWOS Replacement

BID BOND

Recitals:

1. _____,
"Contractor," has submitted its Contractor's Proposal to Fremont County, "Owner," for the construction of public work for the **1V6 AWOS Replacement** project for the Fremont County Airport in accordance with the Notice of Invitation to Bid.

2. _____
corporation, hereinafter called: "Surety," is the surety of this Bond.

Agreement: We, Contractor as principal and Surety as surety, jointly and severally agree and state as follows:

1. The amount of the obligation of this Bond is 5% of the total amount of the Contractor's Proposal and inures to the benefit of the Owner.

2. This Bond is exonerated by (1) the Owner rejecting said Proposal or, in the alternate, (2) if said Proposal is accepted, Contractor executes the Agreement and furnishes the Bonds as agreed to in its Bid, otherwise it remains in full force and effect for the recovery of loss, damage and expense of the Owner resulting from failure of Contractor to act as agreed to in its Bid. Some types of possible loss, damage and expense are specified in the Contractor's Bid.

3. Surety, for value received, stipulates and agrees that its obligations hereunder shall in no way be impaired or affected by any extension of time within which the Owner may accept the Proposal and waives notice of any such extension.

4. This Bond is binding on our heirs, executors, administrators, successors and assigns.

Dated: _____

By: _____ By: _____

Title: _____ Title: _____
"Surety" "Contractor"

STATE OF COLORADO
COUNTY OF _____)ss

On _____ before me personally appeared _____,
know to me to be the person whose name is subscribed to the within instrument as attorney in Fact of _____
_____ a corporation thereto as principal, and his own name and as Attorney in
Fact.

Notary Public

(Seal)

(NOTE: Affix corporate seals.)



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Fremont County Airport
1V6 AWOS Replacement

ATTACHMENT A – LIST OF SUBCONTRACTORS & DBE UTILIZATION
(TO BE COMPLETED BY THE PRIME CONTRACTOR – SUBMITTED WITH BID)

In compliance with bidding requirements, the undersigned hereby submits the names (in the table below) of all Subcontractors, anticipated to be used in the work required to complete **1V6 AWOS Replacement** project.

The Prime Bidder must demonstrate a **self-performance minimum of 50%** of the contract at the time of bid. If the percentage of work shown within the table below exceeds 50% at the time of bid, it may deem the bid as non-responsive and disqualify the bid.

The Prime Bidder, if not a certified DBE, hereby assures that they will make sufficient and reasonable efforts to meet the project **DBE goal of 0.06%** through subcontracting.

The bidder certifies that all Subcontractors listed are eligible to perform work on public projects.

SUBCONTRACTOR'S NAME	SUBCONTRACTOR'S ADDRESS	AGE OF FIRM (YEARS)	WORK TO BE PERFORMED BY SUBCONTRACTOR	DBE Y/N	DOLLAR AMOUNT OF WORK
1.					
2.					
3.					
4.					
5.					
6.					



SUBCONTRACTOR'S NAME	SUBCONTRACTOR'S ADDRESS	AGE OF FIRM (YEARS)	WORK TO BE PERFORMED BY SUBCONTRACTOR	DBE Y/N	DOLLAR AMOUNT OF WORK
7.					
8.					
9.					
10.					
11.					

THE TOTAL PROPOSED CONTRACT VALUE OF DBE FIRM UTILIZATION LISTED IN THE TABLE ABOVE IS \$ _____ OR
_____ % OF THE TOTAL BID AMOUNT.

**THE UNDERSIGNED HEREIN AFFIRMS THAT THE BIDDER WILL ENTER INTO A FORMAL AGREEMENT WITH THE
CONSULTANTS/CONTRACTORS/SUPPLIERS LISTED HEREIN CONDITIONED UPON THE EXECUTION OF A CONTRACT WITH FREMONT COUNTY.**

Name (Type or Print)

Title of Signer (Type or Print)

Signature

Date

Fremont County Airport
1V6 AWOS Replacement

DBE ATTACHMENT B

**LETTER OF INTENT TO PERFORM AS A SUBCONSULTANT/SUBCONTRACTOR/SUPPLIER
(TO BE COMPLETED BY THE DBE/SBE SUBCONTRACTOR/SUPPLIER)**

TO: _____ (Insert name of prime contractor or general bidder)

1. The undersigned is certified as a DBE as of the date of this bid with the following agency:

_____ (please provide agency name and complete **Attachment C**)

2. The undersigned is prepared to perform the following scope(s) of work on the above referenced project:

COMPLETE THIS PORTION IF SCOPE OF WORK IS BID BY UNIT PRICE OR HOURLY RATE (TRUCKING, HAULING, UNIFORMED OFFICERS, ETC.)			
Description	Unit/Hour Estimate	Unit/Hourly Price	Total Minimum Contract Amount
			\$

COMPLETE THIS PORTION IF SCOPE OF WORK IS NOT BID BY UNIT PRICE OR HOURLY RATE	
Description	Total Bid Amount
	\$

3. The undersigned affirms that of the trucking/hauling work quoted above, the following applies:

# of trucks needed to perform the project _____	# of trucks owned by DBE to be used on project _____
# of trucks to be leased from a DBE _____	# of trucks to be leased from a non-DBE _____

4. The undersigned affirms the amount of fees and commissions for work quoted above is as follows:

Unit Price Bid \$ _____ Fees/Commissions Portion of Bid \$ _____

5. The undersigned will sublet and/or award \$ _____ of work bid to a non-DBE firm

6. The undersigned will sublet and/or award \$ _____ of work bid to another certified DBE firm



On the _____ day of _____, 202_, by signature below, the undersigned agrees to enter into a formal agreement/subcontract for the work cited herein should the prime contractor receive award of this contract from Fremont County.

(Print DBE Firm Name)

(Phone Number)

(Authorized Signature)

(Print Name and Title)



Fremont County Airport
1V6 AWOS Replacement

ATTACHMENT C – IDENTIFICATION STATEMENT FOR DBE

TO BE COMPLETED BY THE DBE/SBE SUBCONTRACTOR/SUPPLIER

The undersigned herein affirms that the firm submitting this statement has qualified as a DBE and holds a current DBE certification from a U.S. Department of Transportation (USDOT) recognized certifying agency as follows:

DBE CERTIFYING AGENCY: _____ PHONE

EXPIRATION DATE OF CURRENT DBE CERTIFICATION: _____, 202____

DBE BUSINESS NAME: _____
DBE PRINCIPAL BUSINESS ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE #:(____)_____
DBE QUALIFYING OWNER: _____ TITLE _____

LICENSES HELD BY DBE FIRM: _____
ISSUED BY: _____
SERVICES/WORK/PRODUCTS PROVIDED:



SIGNED AND DATED this _____ day of _____, 202_____

Authorized Signature

Print Name and Title

Fremont County Airport
1V6 AWOS Replacement

ATTACHMENT D – DEMONSTRATION OF GOOD FAITH EFFORTS
(TO BE COMPLETED BY THE PRIME CONTRACTOR – SUBMITTED WITH BID)

In compliance with bidding requirements, the undersigned hereby submits the following DBE companies were contacted in regard to performing work for the **1V6 AWOS Replacement** project:

The bidder certifies that all names listed are eligible to perform work on public projects.

DBE/SBE NAME	DBE/SBE ADDRESS	AGE OF FIRM (YEARS)	WORK TO BE PERFORMED BY DBE/SBE	CERTIFIED DBE (Y or N)	CERTIFIED SBE (Y or N)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					



DBE/SBE NAME	DBE/SBE ADDRESS	AGE OF FIRM (YEARS)	WORK TO BE PERFORMED BY DBE/SBE	CERTIFIED DBE (Y or N)	CERTIFIED SBE (Y or N)
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

Name (Type or Print)

Title of Signer (Type or Print)

Signature

Date



Fremont County Airport
1V6 AWOS Replacement

PREQUALIFICATION FORM

Each bidder is required to furnish satisfactory evidence of competency to perform the work for the aforementioned project.

To: Fremont County Airport
Administrative Office
60298 Highway 50
Penrose, Colorado 81240

Name of Bidder: _____

Corporation ___ Partnership ___ Joint Venture ___ Individual ___ Other _____
Date of Incorporation or Organization _____ State _____

A. Principal's names and titles (President, Vice President, Secretary, Treasurer, Partner. etc)

B. List Contractor Licensing information for the State of Colorado:

Type	License #	Description
------	-----------	-------------

_____	_____	_____
_____	_____	_____

C. List contract work categories normally performed by bidder's own forces:



D. Name of Bonding Company _____

Surety & Agent _____

Address: _____

Phone: _____ Fax: _____

E. Bank Reference:

Banker: _____ Phone: _____

Bank: _____

Address: _____

F. Trade References:

1. Contact: _____ Phone: _____

Company: _____

Address: _____

2. Contact: _____ Phone: _____

Company: _____

Address: _____

3. Contact: _____ Phone: _____

Company: _____

Address: _____

G. Within the last 5 years has your organization: (if yes attach explanation and details)

1. failed to complete a construction contract or subcontract?
Yes _____ No _____
2. filed a lawsuit or requested arbitration to settle a construction contract?
Yes _____ No _____
3. had judgment, claim, lien, arbitration, or suit against it that is still outstanding?
Yes _____ No _____
4. had an officer or principal that has failed to complete a construction contract?
Yes _____ No _____

H. Attach separate sheets containing the following information:

1. The latest certified audited financial statement of the organization financially responsible for the contract including balance sheet, income statement, current assets, fixed assets, current liabilities, other liabilities, and statement preparer's name and address. If an audited statement is not provided, an explanation is required.
2. The major construction projects the organization has performed in the last 3 years. List the project name, location, owner, engineer, contract administrator or inspector, contract amount, percent completion, date of completion, percent of cost done with your forces.
3. Resumes of the key individuals that will be responsible for this contract.
4. Major equipment owned by the organization.

The undersigned bidder certifies that the information provided herein is true and not misleading.

By: _____ (Print or Type)

Title: _____

Signature: _____

Witness: _____ (Print or Type)

Signature: _____

Address: _____

Note: Provision of the above information in other formats may be used in lieu of this form.



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Fremont County Airport
1V6 AWOS Replacement

CONTRACTOR QUESTIONNAIRE

The contractor is required to complete the following questionnaire.

Yes - No

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Has the Owner or other governmental entity incurred costs as a result of contested change order(s) from the undersigned company? |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Has the Owner or other governmental entity been involved in litigation relative to contract performance with the undersigned company? |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Has the undersigned company failed to meet bid specifications or time limits on other contracts? |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Has the undersigned company abandoned a contract or refused to perform without legal cause after submitting a bid? |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Has the undersigned company had bidding errors or omissions in two or more bid submissions within a thirty-six month period? |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Has the undersigned company failed to perform or performed unsatisfactorily on two or more contracts within a thirty-six month period? |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Does the undersigned company have adequate equipment, personnel and expertise to complete the proposed contract? |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Does the undersigned company have a record of safety violations on two or more contracts within a thirty-six month period? |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. Does the undersigned have a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of such a contract or subcontract within a ten-year period? |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. Has the undersigned company been convicted of a criminal offense within a ten-year period of embezzlement, theft, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which might affect responsibility as a municipal contractor? |
| <input type="checkbox"/> | <input type="checkbox"/> | 11. Has the undersigned company been convicted of state or federal antitrust statutes within a ten-year period arising out of submission of bids or proposals? |
| <input type="checkbox"/> | <input type="checkbox"/> | 12. Has the undersigned company been disbarred or a similar proceeding by another governmental entity? |



If you answered “yes” to Items 1-6 or 8-12 or answered “no” to Item 7, please attach a full explanation to this questionnaire.

Company: _____

Address: _____

Name (Type or Print)

Signature

Title (Type or Print)

Date



Fremont County Airport
1V6 AWOS Replacement

AUTHORIZED SIGNATURE FORM

PROJECT: 1V6 AWOS Replacement
Fremont County Airport

Whereas, _____, a
_____ (Name of State) Corporation, is required to execute certain
documents which are necessary for the prompt and efficient execution of the corporate business;

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of
_____, (Corporate Name), that (name of parties authorized)
_____, is/are authorized to execute and sign
on behalf of said corporate the following:

1. Contract
2. Bond
3. Payrolls
4. Claims
5. Change Orders
6. All other papers necessary for the corporation's affairs and the execution of the Contract.

The powers and duties herein granted shall be and are hereby granted for the duration of the contract for this project or until express notice of revocation has been duly given in writing, whichever is the lesser period.

Dated and passed by the Board of Directors this _____ day of _____, 20____.

(Signature of Persons Authorized to Sign)

(Title)

(Document No.)



CERTIFICATE

STATE OF _____)
)ss
COUNTY OF _____)

I, _____ of _____, a corporation, do hereby
certify that the above is a true and correct copy of a resolution adopted by the Board of Directors of said
corporation, at a meeting of said board held on _____, 20____, and that the
same is in full force and effect at this time. Dated _____, 20____.

(Officer of Corporation)

(Seal of Corporation)

STATE OF _____)
)ss
COUNTY OF _____)

This instrument was acknowledged before me on the _____ day of
_____, 20____ by _____
appearing before the undersigned Notary Public, and stated that _____ he executed such instrument
on behalf of said corporation for the purpose and consideration therein expressed.

Notary Public

My Commission Expires:



Fremont County Airport
1V6 AWOS Replacement

CERTIFICATE OF INSURABILITY

I hereby certify that as a Bidder for the aforementioned project, I am fully aware of the Insurance Requirements for the Contractor and that by submitting this bid proposed, assure the Owner(s) that I am able to produce the required minimum insurance coverage should I be selected to the successful bidder.

Should I be selected to the successful bidder and then become unable to produce the insurance coverage prior to the award of the project, I understand that my bid will be rejected and that I will forfeit my bid bond.

Name and Title of Signer (Type or Print)

Signature

Contractor Name

Date



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Fremont County Airport
1V6 AWOS Replacement

CONTRACT AGREEMENT

This CONSTRUCTION CONTRACT is made and entered into as of _____ day of _____, 20____, and is by and between:

Fremont County

hereinafter also referred to as the **Owner**

Fremont County Airport

60298 Highway 50
Penrose, CO 81240

hereinafter also referred to as the **Owner**

AND:

hereinafter also referred to as the **Contractor**

BACKGROUND

A. Owner desires the Contractor to perform the duties of general contractor for the Fremont County Airport **1V6 AWOS Replacement**, (the “Project”).

B. Contractor desires to perform such duties pursuant to the terms and conditions provided for in this Contract.

ARTICLE 1

WORK OF THIS CONTRACT

The work done and materials and equipment furnished shall be strictly pursuant to and in conformity with the Plans, Project Specifications and Contract Documents. The Project Specifications and Contract Documents and drawings furnished to the Contractor with his/her bid and the additional drawings or prints and other information to be furnished by the Contractor in accordance with the Project Specifications and Contract Documents are made a part of the Agreement when and as approved by The Owner, are intended to be complementary and all Project Specifications and Contract Documents, Plans, drawings, or prints furnished by the Contractor and approved by the Owner, shall be complementary therewith. Any work appearing in or upon the one and not mentioned in the others shall be executed according to the true intent and meaning of the said Plans, Project Specifications and Contract Documents, drawings, or prints the same as though the said work were contained and described in all.

The Notice of Invitation of Bid, Instruction to Bidders, General and Special Provisions, Bid Proposal, Bid Bond, Payment Bond, Performance Bond, Certificate of Insurance, Contractor’s Affidavit, Technical Provisions, Appendix, Plans, Addenda No.’s _____, and Change Orders issued and any additional or supplemental specifications, notices, instructions and drawings issued in accordance with the provisions of the Contract Documents are hereby understood to be a part of this Contract. The Bid Bond is exonerated upon execution of this Agreement, the Payment Bond, and the Performance Bond.

ARTICLE 2

DATE OF COMMENCEMENT AND COMPLETION

Contractor agrees to undertake the performance of the Project on the date stated in the Notice to Proceed and agrees to reach substantial completion on the Project within **Thirty-Five (35)** calendar days.

ARTICLE 3

TERMS OF PAYMENT

The Owner shall pay the Contractor for actual quantities of accepted work completed in accordance with the Contract at the unit price or prices set forth in Contractor's Proposal.

Partial payments less 5% retention will be made for estimated quantities of work completed on the Project during the previous month in accordance with the terms of General Provisions Section 90-06. However, nothing herein shall be construed as relieving Contractor and his, her, or its Sureties on the Contractor's Bond from any claim or claims for work or labor done, or materials or supplies furnished, as part of this Agreement and the completion of the Project.

It is the intent of Owner to make any partial payments in the following manner:

1. The Contractor shall submit to Engineer his Application for Payment no later than the next to last Friday of the month.
2. Engineer will, within 7 days after receipt, either return the Application for Payment to the Contractor with corrections requested or submit the approved Application for Payment to Owner for payment along with its Recommendation of Payment, noting any changes. The Owner will then make payment to Contractor when funds are received from the FAA and are available to Owner for payment to Contractor.

ARTICLE 4

BONDS AND INSURANCE

Bonds. At the time of the execution of the Agreement, Contractor shall provide the bonds that are required by the Contract Documents. The Performance Bond will be in an amount not less than one hundred percent (100%) of the Contract Price and shall provide for the completion of the Project in accordance with the Contract Documents, without additional cost to the Owner. The Payment Bond will be in an amount not less than one hundred percent (100%) of the Contract Price and shall provide for the payment of all project costs in accordance with the Contract Documents, without additional cost to the Owner.

Insurance. Contractor shall not commence work under this Contract until Contractor has obtained all insurance required under this section and the insurance has been approved by the County Director of General Administration ("County Administrator") or his designee. Similarly, Contractor shall not allow any approved subcontractor to commence work on his or her subcontract until all similar insurance required of subcontractor has been so obtained and approved. County shall be named as additional insured on all insurance policies required under this Contract. The "additional insured" wording shall be as follows: County of Fremont, State of Colorado, a body corporate and politic, is named as Additional Insured. All insurance policies must be written in a manner consistent with the requirements of the Standard Form Contract. Contractor shall furnish to the County prior to the commencement of Work under this Contract and annually thereafter copies of company-issued Certificates of Insurance policies obtained by Contractor in compliance with this paragraph demonstrating that the insurance requirements have been met, and Contractor shall ensure that the Owner is notified in writing and at least thirty (30) days in advance of any amendment or cancellation of such policy or policies. These Certificates of Insurance shall also contain a valid provision or endorsement that these policies may not be canceled, terminated, changed or modified without thirty (30) days' written notice to the Owner.

Certificates shall be forwarded to:

Tony Carochi
Fremont County Administrator
615 Macon Ave.
Room 106
Canon City, CO 81212

The following insurance shall be required:

1. Comprehensive General Liability, including personal injury liability, blanket contractual liability, and broad form property damage liability. The combined single limit for bodily injury and property damage shall be not less than \$3,000,000.00
2. Automobile Bodily Injury and Property Damage Liability Insurance covering owned, non-owned, rented, and hired cars. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.00. Coverage must include:
 - a. All vehicles owned, non-owned, and hired to be used on the Contract
3. Professional Liability/Errors and Omissions Insurance: \$1,000,000.00 per occurrence, \$2,000,000.00 in the aggregate.
4. Statutory Workers Compensation and Employer's Liability Insurance for the State of Colorado that will protect against any and all claims resulting from injuries to and death of employees, if any, engaged in work under the Contract.
5. Umbrella Insurance providing excess limits over the primary policies described herein of not less than \$5,000,000.00 per occurrence and \$5,000,000.00 general aggregate.

ARTICLE 5

HOLD HARMLESS

The Contractor shall release Owner and Engineer, and all of their agents, representatives, officers, employees, boards, directors, committees, and commissions, of any liability for, and shall protect, defend, indemnify, and hold Owner and Engineer harmless from and against all claims, demands, and causes of action of every kind and character that are asserted or brought on account of bodily injury, death, or damage to property as a result of the actions, omissions, negligence, gross negligence, and/or recklessness of Contractor or Contractor's agents, employees, representatives, invitees, licensees, subcontractors, or subcontractor's subcontractors. Contractor's indemnification obligations under this section shall be without regard to, and without any right to contribution from, any insurance maintained by Contractor. Additionally, Contractor's indemnity obligations under this section shall be supported by insurance, but this insurance requirement shall be a separate and distinct obligation from Contractor's indemnity obligations, and the insurance and indemnity obligations shall be separately and independently enforceable. Further, Contractor's indemnity obligations hereunder are not limited by any insurance coverage Contractor may have.

ARTICLE 6

INSPECTIONS

Inspection of work shall be by the Engineer or the Owner. During such inspections, any work determined by the Engineer/Owner to be unacceptable shall be corrected at the contractor's expense. The Engineer or Owner shall be the final determinant of unacceptable work.

ARTICLE 7

LITIGATION

To prevent all disputes and litigation, it is agreed by and between the Owner and said Contractor, that the Owner shall determine all questions in relation to the work and the construction thereof, and it shall in all cases decide all questions which may arise relative to the execution of the work under this Contract on the part of the said Contractor and its estimates and decisions shall be final and conclusive; and such estimates and decisions, in case any questions may arise, shall be a condition precedent to the right of said Contractor to receive any money or compensation for anything done or furnished under this Contract.

The parties hereto expressly covenant and agree that in the event of a dispute arising from this Agreement, each of the parties hereto waives any right to a trial by jury. In the event of litigation, the parties hereby agree to submit to a trial before a Court of competent jurisdiction. The Contractor further agrees that this provision shall be contained in all subcontracts related to the project which is the subject of this Agreement.

The parties hereto expressly covenant and agree that in the event of litigation arising from this Agreement, neither party shall be entitled to an award of attorney fees, either pursuant to the Contract, pursuant to relevant state law, or pursuant to any other state or federal statute. The Contractor further agrees that this provision shall be contained in all subcontracts related to the project that is the subject of this Agreement.

The parties hereto expressly covenant and agree that in the event of a dispute arising from this Agreement, each of the parties hereto waives any right to a trial by jury. In the event of litigation, the parties hereby agree to submit to a trial before the Court. The parties hereto further expressly covenant and agree that in the event of litigation arising from this agreement, neither party shall be entitled to an award of attorneys' fees, either pursuant to the Contract or pursuant to any other state or federal statute.

ARTICLE 8

FINAL PAYMENT

Final payment, constituting the entire unpaid balance of the Contract Price, shall be made by the Owner to the Contractor when the Work has been completed and accepted by the Engineer and the Owner.

ARTICLE 9

LIQUIDATED DAMAGES

All time limits stated in the Contract Documents and the Construction Plans are of the essence and should the Contractor fail to complete the work required to be done on or before the time of completion as set forth in these Contract Documents and Construction Plans, including any authorized extension of time, it is mutually agreed and understood by and between the parties that the Owner will incur additional expenses specifically for unanticipated efforts and costs of the Engineer, the Construction Manager, the Resident Engineer/Inspector; plus any related incurred expenses (per diem, lodging, etc.); and that the parties hereto wish to fix the amount of said specific costs/damages in advance.

The Contractor will be assessed the following Liquidated Damages if he exceeds any of the time limits stated within these Contract Documents or the Construction Plans. Liquidated Damages are identified below:

1. **Phase 1 – \$500** per day for each and every day's delay in Substantial Completion and Acceptance of the work required to be done by the Contractor within the total specified Contract time, (**30 Calendar Days**).
2. **Phase 2 – \$500** per day for each and every day's delay in Substantial Completion and Acceptance of the work required to be done by the Contractor within the total specified Contract time, (**5 Calendar Days**).
3. **Final Completion – \$500** per day for each and every day's delay in Final Completion and Acceptance

of the work required to be done by the Contractor within the total specified Contract time, (**7 Calendar Days**).

The above Liquidated Damages represent a reasonable estimate of the above-noted specific additional costs to the Owner for such breach, therefore, the Owner and Contractor agree to the above liquidated damages for the breach of the agreement to complete any work required to be done by the Contractor on or before the time of completion and acceptance, and, in the case of such breach, the Owner shall deduct said amount from the amount due the Contractor under the Contract. In the event the remaining balance due the Contractor is insufficient to cover the full amount of assessed liquidated damages, then the Contractor or the surety on the bonds shall pay the difference due the Owner. Assessment of Liquidated Damages will be in conformance to *General Provisions* Section 80-08 *Failure to Complete on Time*.

IN WITNESS WHEREOF, five (5) identical counterparts of this Contract, each of which shall for all purposes be deemed an original thereof, have been duly executed by the parties hereinabove named, on the date and year first herein written.

ARTICLE 10

Independent Contractor

Contractor is an independent contractor and is responsible for all taxes (including employment taxes) and insurance applicable under existing laws with respect to the fees paid under this Contract. Neither Contractor, nor its subcontractors, employees or agents shall have authority to bind the Owner in any contract or agreement. Neither Contractor, nor its subcontractors, employees or agents will have any claim or right to participate in any retirement, bonus, welfare or benefit plans of the Owner. Contractor acknowledges that neither it, nor its employees or its subcontractors are entitled to unemployment insurance benefits or workers' compensation benefits from The Owner, its elected officials, agents, or any other County benefits or compensation from any program administered or funded by The Owner. Contractor shall be entitled to unemployment insurance or workers' compensation insurance only if unemployment compensation coverage or workers' compensation coverage is provided by Contractor, or some other entity that is *not* a party to this Contract.

ARTICLE 11

Expenses

Except as specifically set forth in this Contract, Contractor is responsible for Contractor's expenses and overhead, including without limitation, travel, insurance, material and equipment expenses, and expenses in connection with furthering Contractor's skills or membership in professional societies and organizations.

ARTICLE 12

Liability for Damages

1. The Owner, its officers, agents or employees, shall not in any manner be answerable or responsible for any loss or damage to the Work or to any part of the Work; for any loss or damage to any materials, building, equipment or other property that may be used or employed in the Work, or placed on the worksite during the progress of the Work; for any injury done or damages or compensation required to be paid under any present or future law, to any person, whether an employee of Contractor or otherwise; or for any damage to any property occurring during or resulting from the Work.
2. Contractor shall be liable and responsible for any and all damages to persons or property caused by or arising out of the actions, obligations, or omissions of Contractor, its employees, agents, representatives or other persons acting under Contractor's direction or control in performing or failing to perform the Work under this Contract. Contractor will defend, indemnify and hold harmless Owner, its elected and appointed officials, employees, agents and representatives (the "indemnified parties"), from any and all

liability, claims, demands, actions, damages, losses, judgments, costs or expenses, including but not limited to attorneys' fees, which may be made or brought or which may result against any of the indemnified parties as a result or on account of the actions or omissions of Contractor, its employees, agents or representatives, or other persons acting under Contractor's direction or control. In addition, the parties reserve the right to bring tort claims in the event of the discovery of an intentional fraud committed during contract performance. Nothing in this indemnification agreement shall be construed in any way to be a waiver of County's immunity protection under the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, *et seq.*, as amended and as may be amended from time to time. This section shall survive the termination of this Contract. As a political entity and subdivision of the State of Colorado, Fremont County is not authorized to indemnify any party, public or private, from the claims, demands, or damages of third parties.

ARTICLE 13

Indemnity Requirements for Design and Engineering

Pursuant to C.R.S. § 13-50.5-102(8)(a), any public contract or agreement for architectural, engineering, or surveying services; design; construction; alteration; repair; or maintenance of any building, structure, highway, bridge, viaduct, water, sewer, or gas distribution system, or other works dealing with construction, or any moving, demolition, or excavation connected with such construction that contains a covenant, promise, agreement, or combination thereof to defend, indemnify, or hold harmless any public entity is enforceable only to the extent and for an amount represented by the degree or percentage of negligence or fault attributable to the indemnity obligor or the indemnity obligor's agents, representatives, subcontractors, or suppliers. Any such covenant, promise, agreement, or combination thereof requiring an indemnity obligor to defend, indemnify, or hold harmless any public entity from that public entity's own negligence is void as against public policy and wholly unenforceable.

ARTICLE 14

Prohibition Against Discrimination

1. Contractor shall not discriminate because of race, color, religion, sex, age, national origin, marital status, disability or status as a Vietnam veteran, as defined and prohibited by applicable law, in the recruitment, selection, training, utilization, promotion, termination or other employment-related activities concerning Contractor's employees. In addition, Contractor affirms that it is an equal opportunity and affirmative action employer, and that it shall comply with all applicable federal, state, and local laws and regulations including, but not limited to, the letter and spirit of the Colorado Anti-Discrimination Act, executive order 11246 as amended by 11375 and 12086; 12138; 11625; 11758; 12073; the Rehabilitation Act of 1973, as amended; the Vietnam Era Veterans Readjustment Assistance Act of 1975; Civil Rights Act of 1964; Equal Pay Act of 1963; Age Discrimination in Employment Act of 1976; Immigration Reform and Control Act of 1986; Public Law 95-507; the Americans With Disabilities Act, the Colorado Anti-Discrimination Act; and any additions or amendments thereto. The Equal Opportunity Clauses set forth in 41 CFR § 60-1.4 and 41 CFR § 60-741.5 are hereby incorporated by reference into this Contract.
2. No contractor, subcontractor or any person on behalf of such contractor or subcontractor, shall, in any manner, discriminate against or intimidate any employee hired for the performance of Work under this Contract on account of race, color, religion, sex, sexual preference, or national origin. For each person who is discriminated against or intimidated in violation of the provisions of this Contract, there may be deducted from the amount payable to Contractor by Owner under this contract a penalty of \$100.00 for each calendar day during which discrimination or intimidation occurred. This Contract may be canceled or terminated by Owner, and all monies due or to become due under this Contract may be forfeited, for a second or any subsequent violation of the terms or conditions of this section of this Contract. The deduction of any moneys or termination of Contract under this section shall not operate as a bar to any person pursuing individual legal remedies for discrimination.
3. In all solicitations by Contractor for any work related to this Contract to be performed under a

subcontract, either by competitive bidding or negotiation, Contractor shall notify each potential subcontractor of Contractor's obligations under this Contract, and of all pertinent regulations relative to nondiscrimination and unfair employment practices.

ARTICLE 15

No Waiver of Breach

The Owner's failure to insist upon strict compliance with the provisions of this Contract will not be construed in any way as a waiver of any of the Owner's rights or privileges. All remedies afforded in this Contract shall be cumulative, that is, in addition to every other remedy provided in this Contract or by law.

ARTICLE 16

Prohibition on Acceptance of Gifts

Pursuant to Section 3 of Art. XXIX of the Constitution of the State of Colorado, County Employees or contractors cannot accept any gifts, meals, theatre or sporting event tickets unless:

1. the aggregate value of things received from a single source does not exceed \$75/calendar year; or
2. the County employee/elected official gave the donor consideration of equal or greater value; or
3. an enumerated exception applies.

ARTICLE 17

Personal Identifiable Information

If Contractor or any of its subcontractors will or may receive Personal Identifiable Information ("PII") as defined in CRS § 24-73-101, *et seq.* and as may be amended from time to time, under this Contract, Contractor shall provide for the security of such PII, in a manner and form acceptable to the Owner, including without limitation, all legal requirements relating to non-disclosure, use of appropriate technology, security practices, computer access security, data access security, data storage encryption, data transmission encryption, security inspections, and audits. Contractor shall be a "Third-Party Service Provider" as defined in CRS § 24-73-103(1)(i) and shall maintain security procedures and practices consistent with CRS § 24-73-101.

ARTICLE 18

Colorado Open Records Act

All information provided under this Contract is subject to public disclosure under the Colorado Open Records Act ("CORA") or the Colorado Criminal Justice Records Act ("CCJRA") unless clearly identified and marked as confidential and qualifies as confidential under CORA or CCJRA.

ARTICLE 19

Controlling Law and Jurisdiction

The interpretation and performance of this Contract shall be construed under the laws of Colorado, without regard to choice of law principles. In the event of litigation, jurisdiction and venue shall be in the Fremont County District Court.

ARTICLE 20

Successors and Assigns; Assignment; Subcontractors

The rights and obligations of the Owner under this Contract will inure to the benefit of and will be binding upon the successors and assigns of Owner. Contractor may not subcontract, pledge, assign or transfer either this Contract or any of the payments or benefits under this Contract without the written consent of Owner.

ARTICLE 21

Statutory and Regulatory Requirements

This Contract is subject to all statutory and regulatory requirements that are or may become applicable to counties or political subdivisions of the State of Colorado generally. Without limiting the scope of this provision, the Contract is specifically subject to the following:

1. Contract payments may be withheld pursuant to C.R.S. § 38-26-107 if the Owner receives a verified statement that Contractor has not paid amounts due to any person who has supplied labor or materials for the Project.
2. The work shall be in compliance with the Davis-Bacon Wage Rates

ARTICLE 22

Attorney Fees

Notwithstanding any provision in any other document or proposal, each party shall be responsible for its own attorney fees and costs in connection with enforcing this Contract.

ARTICLE 23

Captions

The captions in this Contract are inserted only for the purpose of convenient reference and in no way define, limit, or prescribe the scope or intent of this Contract or any part thereof.

ARTICLE 24

Amendment

This Contract shall not be amended, except by subsequent written Contract of the parties.

ARTICLE 25

Severability

If a tribunal of competent jurisdiction determines that any provision of this Contract is void, illegal, or unenforceable, the other provisions will remain in full force and effect. Any provision determined to be void, illegal, or unenforceable will be limited so that this Contract will remain in effect to the fullest extent permissible by law.

ARTICLE 26

Priority of Provisions

In the event that any terms of this Agreement and any Exhibit, attachment, or other referenced document are inconsistent, the following order of priority shall control:

- 1st: This Contract unless otherwise provided for in a subsequent contract or agreement
- 2nd: Request for Proposal (if applicable)
- 3rd: Insurance Requirements
- 4th: Exhibit A - Scope of Services and details of Contractor's Fees (if applicable)
- 5th: Response to Request for Proposal (if applicable)

ARTICLE 27

Counterparts

This Contract may be executed in counterparts, each of which shall be deemed an original, and all of which, when taken together, shall be deemed one and the same instrument.

ARTICLE 28

Authority

Each person signing this Contract represents and warrants that s/he is fully authorized to enter into and execute this Contract, and to bind the party it represents to the terms and conditions.

ARTICLE 29

Notices

All notices shall be in writing. Notices will be deemed to have been duly given if delivered personally or if mailed via certified mail (return receipt requested and postage prepaid) and confirmed by such certified mail receipt, given by facsimile or e-mail confirmed by receipt, or sent by courier confirmed by receipt, addressed to the party at the address set forth below or at such other address as either party may designate to the other in accordance with this Section. Notices shall be deemed to be given on the date of receipt, except that if delivery is refused, notice shall be deemed given on the fifth (5th) day after it is sent.

ARTICLE 30

Third Party Beneficiary

The enforcement of the terms and conditions of this Contract and all rights of action relating to such enforcement shall be strictly reserved to the Owner and Contractor, and nothing contained in this Contract shall give or allow any claim or right of action whatsoever by any other or third person. It is the express intent of the parties to this Contract that any person receiving services or benefits under this Contract shall be deemed an incidental beneficiary only.

ARTICLE 31

Termination of Prior Agreements

This Contract cancels and terminates, as of its effective date, all prior agreements between the parties relating to the services covered by this Contract, whether written or oral or partly written and partly oral.



ARTICLE 32

Waiver

Any waiver of a breach of this Contract shall not be held to be a waiver of any other or subsequent breach of this Contract. All remedies afforded in this Contract shall be taken and construed as cumulative, that is, in addition to every other remedy provided herein or by law.

ARTICLE 33

Survival

All express representations, indemnifications or limitations of liability included in this Contract will survive its completion or termination for any reason.

ARTICLE 34

Binding Effect

This Contract shall be binding upon and inure to the benefit of the parties and their respective heirs, successors, and assigns.

ARTICLE 35

Entire Agreement

All exhibits to this Contract and provisions set forth in Owner's Request for Proposal and Contractor's responses to the Owner's Request for Proposal, if any, together with any alterations and/or modifications, are incorporated as part of this Contract and such represent the entire agreement between the Owner and Contractor with respect to the transactions contemplated by this Contract and supersede all previous negotiations, commitments, letters of intent and other writings.

FOR THE Contractor

FOR THE Owner

By: _____
Name

By: _____
Name

Title

Title

Date: _____

FREMONT COUNTY, COLORADO
PARTY OF THE FIRST PART (OWNER)

Clerk

APPROVED: (AS TO FORM)

COUNTY ATTORNEY

PARTY OF THE SECOND PART (CONTRACTOR)



Fremont County Airport
1V6 AWOS Replacement

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That we _____ a _____ hereinafter called "Principal" and

Surety

of _____, State of _____, hereinafter called the "Surety", are held and firmly bound unto Fremont County, hereinafter called "Owner", in the penal sum of:

_____ Dollars (\$ _____)
in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of:

Project Name:

1V6 AWOS Replacement

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, supplies, lubricants, oil, gasoline, rental machinery, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractors or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or to the specifications accompanying the same shall in any way effect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.



IN WITNESS WHEREOF, this instrument is executed this the ____ day of _____, 20____.

ATTEST:

Principal

By _____
Principal Secretary

By _____

Title _____

(SEAL)

(Address)

By _____
(Witness as to Principal)

(Address)

Surety

ATTEST:

By _____
(Surety) Attorney-In-Fact

By _____
Attorney-In-Fact

(SEAL)

(Address)

By _____
(Witness as to Surety)

(Address)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners shall execute the bond.



Fremont County Airport
1V6 AWOS Replacement

PERFORMANCE BOND

Bond Number _____

KNOW ALL MEN BY THESE PRESENTS:

That we _____ a _____ hereinafter called "Principal" and

Surety

of _____, State of _____, hereinafter called
the "Surety", are held and firmly bound unto Fremont County, hereinafter called "Owner", in the penal sum
of:

_____ Dollars (\$ _____)
in lawful money of the United States, for the payment of which sum well and truly to be made, we bind
ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these
presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain
contract with the Owner dated the _____ day of _____, 20____, a copy of which is
hereto attached and made a part hereof for the construction of:

Project Name:

1V6 AWOS Replacement

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the
undertakings, covenants, terms, conditions and agreements of said contract during the original term
thereof (including all warranty periods), and any extensions thereof which may be granted by the Owner,
with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such
contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it
may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense
which the Owner may incur in making good any default, then this obligation shall be void; otherwise to
remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no
change, extension of time, alteration, or addition to the terms of the contract or to the work to be
performed thereunder or to the specifications accompanying the same shall in any way effect its
obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration
or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge
the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed this the _____ day of _____, 20____.



ATTEST:

By _____
Principal Secretary

Title _____

(SEAL)

By _____
(Witness as to Principal)

(Address)

ATTEST:

By _____
(Surety) Attorney-In-Fact

(SEAL)

By _____
(Witness as to Surety)

(Address)

Principal

By _____

(Address)

Surety

By _____
Attorney-In-Fact

(Address)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners shall execute the bond.

(The penalty of this bond is deemed to be 100% of the total amount of the Contract described herein)



Fremont County Airport
1V6 AWOS Replacement

CERTIFICATE OF INSURANCE

The

certifies that the following insurance policies have been issued on behalf of:

Name of Insured _____

Address of Insured _____

Name and Address of Additional Named Insured: Fremont County
615 Macon Ave.
Suite 106
Canon City, Colorado 81212

TYPE OF INSURANCE	POLICY NO.	EFF. DATE	EXPIR. DATE	LIMITS OF LIABILITY
1. Comprehensive General Liability Personal Injury Liability Blanket Contractual Liability Broad Form Property Damage Liability				\$3,000,000 each occurrence
2. Automobile Bodily Injury & Property Damage				\$1,000,000 each occurrence
3. Professional Liability Errors and Omissions Insurance				\$1,000,000 each occurrence \$2,000,000 aggregate
4. Workmen's Compensation				Statutory
5. Umbrella Insurance				\$5,000,000 each occurrence \$5,000,000 aggregate



Policy Includes Coverage for:

- a. Damage caused by blasting.
 - b. Damage caused by collapse or structural injury.
 - c. Damage to underground utilities.
 - d. Liability assumed in construction agreements and other types of contracts or agreements in effect in connection with insured operations.
 - e. All owned, hired, or non-owned automotive equipment used in connection with the insured operation.
-

It is agreed that none of these policies will be cancelled or changed so as to affect this certificate until thirty (30) days written notice of such cancellation or change has been delivered to Fremont County, hereinafter called "Owner".

It is further agreed that:

These policies shall not expire until all work has been completed and the project has been accepted by the Owner (If a policy does expire during the life of a Contract, a renewal Certificate of the required coverage must be sent to the Owner not less than ten (10) days prior to expiration date.) The Contractor hereby agrees to indemnify and save harmless the Owner and any jurisdiction or agency issuing permits for any work included in the project, their officers, agents, employees and representatives from any liability whatsoever, including wrongful death, based or asserted upon any act or omission of Contractor, its officers, agents, employees or subcontractors relating to or in anywise connected with or arising from the accomplishment of the work, whether or not such acts or omissions were in the furtherance of the work required by the Contract Documents and agrees to defend at his expense, including attorney fees; Owner, its officers, agents, employees and independent Engineer in any legal action based upon any such alleged acts or omissions.

This Certificate is not valid unless countersigned by an authorized representative of the Insurance Company.

Countersigned By:

Signature

Date: _____



Fremont County Airport
1V6 AWOS Replacement

CONTRACTOR'S AFFIDAVIT
REGARDING SETTLEMENT OF CLAIMS & CERTIFICATION OF COMPLETION
& WARRANTIES

To Fremont County, Colorado, hereinafter called "Owner".

Gentlemen:

This is to certify that all lawful claims for materials, rental of equipment and labor used in connection with the construction of the above project, whether by subcontractor or claimant in person, have been duly discharged.

The undersigned, for the consideration of \$ _____, as set out in the final pay estimate, as full and complete payment under the terms of the Contract, hereby waives and relinquishes any and all further claims or right of lien under, in connection with, or as a result of the above described project. The undersigned further agrees to indemnify and save harmless the Owner against any and all liens, claims of liens, suits, actions, damages, charges and expenses whatsoever, which said the Owner may suffer arising out of the failure of the undersigned to pay for all labor performance and materials furnished for the performance of said installation.

This is to further certify that the project is completed to acceptable standards as defined in the plans and specifications for said Project Contract Agreement. All materials used and workmanship performed are expressly warranted to be free of defects for a period of 12 months from the date of final acceptance by the Owner's Contracts Officer.

Signed and dated at _____,
this _____ day of _____, 20____.

Contractor

By: _____

STATE OF COLORADO)
) ss
COUNTY OF _____)

The foregoing instrument was subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public

My commission expires: _____



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Fremont County Airport
1V6 AWOS Replacement

UNCONDITIONAL WAIVER AND RELEASE OF FINAL PAYMENT

Project: 1V6 AWOS Replacement

Job No.: FAA AIP No. 3-08-0009-025-2025

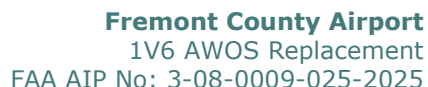
The undersigned has been paid in full for all labor, services, equipment or material furnished to the jobsite or to the Fremont County Airport , on the job of _____ located at _____ and does hereby waive and release any right to mechanic's lien, any state or federal statutory bond right, any private bond right, any claim for payment and any rights under any similar ordinance, rule or statute related to claim or payment rights for persons in the undersigned's position, except for disputed claims for extra work in the amount of \$_____.

The undersigned warrants that he either has already paid or will use the monies he receives from this final payment to promptly pay in full all of his laborers, subcontractors, materialmen and supplies for all work, materials, equipment or services provided for or to the above referenced project.

Dated: _____
(Company Name)

By: _____
(Signature)

(Title)



This document waives rights unconditionally and states that you have been paid for giving up those rights. This document is enforceable against you if you sign it, even if you have not been paid. If you have not been paid, use a conditional release form.

STATE OF COLORADO)
)ss
COUNTY OF)

On this, the ____ day of _____, 20__, before me the undersigned officer, personally appeared _____, known to me to be the person who subscribed the foregoing instrument, and acknowledged that he executed the same for and on behalf of said person/corporation for the purpose therein expressed.

Notary Public

My Commission Expires_____



DIVISION II
SPECIAL PROVISIONS

FREMONT COUNTY AIRPORT
1V6 AWOS Replacement
FAA AIP No: 3-08-0009-025-2025

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SPECIAL PROVISIONS

SECTION 10 GENERAL

10.01 OWNER

Wherever the word Owner(s), Sponsor, or Municipality appears in these specifications it shall be construed to mean Fremont County as the operator of Fremont County Airport (1V6 or Airport) as identified below:

Wes Brandt – Airport Manager
or Authorized Representative
Fremont County Airport
60298 Hwy 50
Penrose, CO 81240
T: (719) 784-3816

10.02 ENGINEER

10.02.01 The Engineering Consultant for design for this project is:

Dibble
2696 South Colorado Blvd., Suite 330
Denver, CO 80222
Phone: (303) 872-5756

10.02.02 The Resident Engineer for this project is:

Dibble
2696 South Colorado Blvd., Suite 330
Denver, CO 80222
Phone: (303) 872-5756

10.03 LOCATION OF THE WORK

The Airport is owned and operated by Fremont County. The work is located on the airport property, in the infield, south of Runway 11-29.

10.04 GENERAL DESCRIPTION OF THE WORK AND CONTRACT SCHEDULE

The **AWOS Replacement** project will be funded, in part, by a grant from the Federal Aviation Administration (FAA), a grant from the Colorado Department of Transportation (CDOT) Aeronautics Department, and local funds.

The major items of work associated with the **AWOS Replacement** project include the following:

- Installation of new AWOS foundations
- Installation of new AWOS wind sensor tower
- Installation of new AWOS electrical infrastructure
- Installation of new AWOS III P/T array
- Installation of new wireless radio kit in Terminal Building
- Commissioning of the new system with FAA Inspector

The Owner's (Fremont County) intent is to award the contract to the lowest, responsive, responsible, and qualified bidder.

10.05 SPECIFICATIONS AND CONTRACT DOCUMENTS – ORDER OF PRECEDENCE

Whether included herein or made a part by reference, the following are considered part of this Contract:

1. Division I – Sponsor Front End Contract Documents
2. Division II – Special Provisions
3. Division III – Federal Assurances
4. Division IV – Federal Wage Determinations
5. Division V – Federal General Provisions
6. Division VI – Federal Technical Specifications
7. Construction Plans

From time to time, discrepancies within cited document occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within documents, the Contractor shall immediately ask the Engineer for an interpretation and decision, and such decision shall be final.

10.06 SCHEDULE OF DRAWINGS

See Construction Drawings, Sheet G1.1.

10.07 RFI SUBMITTAL PROCESS

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Contract Documents, the Contractor shall submit a Request for Information (RFI) to the Engineer in the format specified in this Special Provision. Such request shall clearly state the Contractor's question or concern, reference the specification or plan sheet in question and state the date the request is submitted and the date by which the Contractor must



have an answer in order not to delay Contractor operations. Contractor shall submit an RFI as soon as possible after having discovered need for additional information or clarification. The Engineer shall provide such further explanations as may be necessary and the Contractor shall conform to them as part of the contract. In the event of any doubt or question arising respecting the true meaning of these specifications, the Special Provisions or the plans, reference shall be made to the Engineer, whose decision thereon shall be final.

END SECTION 10



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SECTION 20 CONTRACT ITEMS

20.01 LICENSING

It is the responsibility of the bidder to determine whether the bidder has the appropriate contracting licenses to perform the work. The Owner will make the award, if any, to the responsible bidder who has the proper licenses. The bidder is required to have the licenses at the time of bidding.

20.02 ERRORS AND OMISSIONS

Minor errors or omissions in the Proposal Form, Plans, or Specifications shall not relieve the Contractor from fulfilling the general intent of the Contract or from completing any item or items called for in the Plans, Specifications, or Proposal Form.

20.03 PERMITS

It is the responsibility of the Contractor to acquire and pay for all necessary permits as required for work performed at the Airport. The Contractor is responsible for the cost of, but not limited to, grading permits, Federal Clean Water Act, air quality permits, water meters, water and sewer taps, fire lines and taps, and all water bills on the project until the project is finally accepted. This provision does not constitute an assumption by the Airport of an obligation of any kind for violation of said permit or notice requirements. The cost of all required permits shall be included as non-pay items.

20.04 TAXES

Each bidder and the Contractor shall thoroughly familiarize himself with all laws, ordinances, regulations and rules required for the payment of taxes, and each Bidder and the Contractor are responsible for checking with the State of Colorado, and the Owner(s) on items that may be exempt, and the steps which should be taken to obtain such exemption.

20.05 ACCESS TO DOCUMENTS, RECORDS, ETC

The Owner(s), the FAA, CDOT, or any of their duly authorized representatives shall be allowed access to any books, documents, papers, and records of the Contractor which are directly pertinent to the Airports Program project for the purpose of making audit, examinations, excerpts, and transcriptions.

20.06 CONSTRUCTION COST INFORMATION

The Contractor shall furnish any and all cost information requested by the Engineer. The Airport or any of their authorized representatives shall be allowed access to any books, documents, papers and records of the Contractor that are directly pertinent to these projects for the purpose of making audit, examinations, excerpts and transcriptions.

20.07 FINAL PAYMENT

Upon satisfactory completion of all items called for in the Fremont County Contract and in accordance with the approved plans and specifications, the Contractor shall furnish to the Engineer the following documents (at a minimum) for the project:

1. A Contractor's Affidavit Regarding the Settlement of Claims
2. An original Affidavit acknowledging that all Subcontractors, Material Suppliers, Payrolls, Bills for Materials and Equipment, and other indebtedness connected with the work have been paid or are otherwise satisfied
3. An original Certificate evidencing that the required Insurance as contained within the Contract Documents is currently in effect and will not be canceled or allowed to expire until at least 30-days prior to written notice has been given to the Owner
4. A written consent of the Surety to Final Payment
5. Full and Final Release and Waiver on Liens from the Contractor and for each Subcontractor and Material Supplier, that documents that they have been paid in full
6. Certificate of Completion
7. Written 1-year Warranty, due at final completion, and other required documentation as provided for in Contract Documents.
8. Contractor's As-Built Record Drawings signed by his surveyor.

The Contractor shall also be required to furnish the Owner with sworn affidavits attesting that all subcontractors, employees, materials suppliers, mechanics, etc. have been paid in full, for all debts incurred by the Contractor for work on this Contract. Upon receipt of the above clearances, and as listed elsewhere in these Contract Documents, the Contractor will receive full payment for the entire amount of his Contract, less previous progress payments as provided for in the Contract Agreement.

20.08 LIEN RELEASE

The Contractor shall submit monthly to the Engineer, a lien release which documents the amount that all subcontractors and material supplies have been paid for the previous month's work. No payment for the current month will be made until the Contractor has provided all lien releases for the previous month.

20.09 PAY ITEMS

All pay items relating to the work indicated in these Contract Documents are listed in the bid proposal sheet. The Contractor shall include all necessary costs to complete this project within these items. Any work necessary to complete the project as represented in the Plans and Specifications that is not specifically noted as a pay item on the bid proposal sheet shall be considered incidental to the project and no separate payment will be made.

END SECTION 20

SECTION 30 PRE-CONSTRUCTION CONFERENCE AND SUBMITTALS

30.01 PRE-CONSTRUCTION CONFERENCE

The Contractor's project superintendent, the Construction Administration Resident Engineer & Inspector, the Engineer, Fremont County representatives (if needed), an FAA representative (if needed), a CDOT representative (if needed) and Airport staff shall attend a Pre-Construction Conference, conducted by the Engineer to discuss the following subjects, (at minimum).

GENERAL INTEREST AND SAFETY ITEMS

1. The scope of the project and the sequence and timing of all operations.
2. Submission of Contractor's construction schedule and barricade plan.
3. Relationship of the resident engineer to the Sponsors with emphasis on the authority of the resident engineer to act in the Sponsor's behalf.
4. Advise that the Owner has the authority to suspend operations, wholly or in part, when safety violations or nonconformance to the contract specifications are noted.
5. Relationship between Fremont County, CDOT and the FAA.
6. Identification of the Contractor's superintendent and a discussion of his/her authority and responsibilities.
7. Designation of sponsor representative responsible for notifying the Flight Service Station serving the airport of the proposed start and completion dates of construction or any circumstances requiring a NOTAM.
8. Scheduling of work and the need to perform certain items at various stages of the project, including operational safety problems that might arise because of the proposed work.
9. Discuss the construction notice to proceed date.
10. Operational Safety on Airports during construction, including the responsibility for marking and lighting of closed and hazardous areas. See FAA AC 150/5370-2, *Operational Safety on Airports During Construction*, current edition, and FAA AC 150/5340-1, *Standards for Airport Marking*, current edition, for detailed information.
11. Security requirements as identified (at a minimum) in the *Construction Safety and Phasing Plan* and the *Contractor's Safety Plan Compliance Document*.
12. All responsible parties must be alert to the following hazard-producing situations that may develop during the construction period:
 - a. Damage to existing in-use pavement lighting, marking or NAVAIDS by construction forces.
 - b. Spillage from vehicles on active airport pavement.
 - c. Temporary stockpiling of material for an extended period of time.
 - d. Contractor vehicular traffic through restricted critical areas of NAVAID facilities and the airport operating area.
 - e. Dust control and environmental factors, such as burning, waste disposal, etc.

- f. Maintenance of sanitary facilities on the project site.

CONSTRUCTION ITEMS AND QUALITY CONTROL TESTING

1. The general requirements of quality control and testing to be performed by the contractor. It should be clearly understood who will do the testing, what is to be tested, when it is to be tested, and the location and number of tests.
2. Discussion of Test Reports. Each report should, as a minimum, contain the following information.
 - a. Test performed.
 - b. Applicable standard.
 - c. Test location.
 - d. Test result.
 - e. Action taken for failing tests.

A copy of all test reports shall be furnished to the resident engineer in a timely manner. Failing test results should be reported to the resident engineer immediately. Explain that the FAA, nor CDOT, is not obligated to financially participate in construction that does not meet contract plans and specifications.

3. Emphasize the Role of the Resident Engineer. Duties include the following:
 - a. Ensure all required testing is performed.
 - b. Ensure tests are performed at the frequency stated in the specifications. If not stated in the specifications, make sure an adequate number of tests are taken to document an acceptable level.
 - c. Review test results for conformance to specifications.
 - d. Inform the contractor of deficiencies so that corrections can be made and retests performed prior to covering any substandard work with additional material.
 - e. Maintain record of quantity of materials used on the project.
 - f. Maintain copies of test reports on file.
 - g. Maintain a diary. Contents of a diary should include:
 - (1) Weather conditions and temperature.
 - (2) Work in progress and location.
 - (3) Equipment in use - types and numbers.
 - (4) Size of work force, including supervision.
 - (5) Hours worked per day for contractor or subcontractors.
 - (6) Materials delivered.
 - (7) Any instructions to the contractor.
 - (8) Principal visitors.
 - h. Maintain a set of working drawings that can be used to prepare "as-constructed" drawings. Record drawings shall be furnished by the Contractor.

4. Discussion of Weekly construction report, Construction Progress and Inspection Report (FAA Form 5370-1), (if required).
5. Change orders, time extensions, periodic cost estimates, and liquidated damages.

LABOR REQUIREMENTS.

See Division III - Federal Assurances.

CIVIL RIGHTS REQUIREMENTS.

Civil rights requirements including items such as Disadvantaged Business Enterprise Program (DBE) and Equal Employment Opportunity.

ENVIRONMENTAL.

Comply with applicable federal, state, and local, air and water quality standards during construction and any environmental mitigation actions resulting from the environmental coordination process.

ARCHAEOLOGICAL AREAS.

Although not likely needed for this project, the Contractor shall comply with applicable federal, state, and local preservation standards in archaeological areas during construction, (if necessary).

30.02 CONSTRUCTION SCHEDULE

The Contractor shall submit to the Engineer for review, its proposed construction schedule at or before the Pre-Construction Meeting. Here is a list of anticipated Owner(s) holidays where airport staff may be limited:

- a. The night shift prior to Memorial Day
- b. All day on Memorial Day;
- c. The night shift on Memorial Day;
- d. The night shift prior to the 4th of July;
- e. All day on the 4th of July;
- f. The night shift on the 4th of July;
- g. The night shift prior to Labor Day;
- h. All day on Labor Day;
- i. The night shift of Labor Day;
- j. The night shift prior to Thanksgiving Day;
- k. All day on Thanksgiving Day;
- l. The night shift on Thanksgiving Day;
- m. All day on the day after Thanksgiving Day
- n. The night shift the day after Thanksgiving Day
- o. The night shift on Christmas Eve;
- p. All day on Christmas day;
- q. The night shift on Christmas Day;
- r. The night shift on New Year's Eve;
- s. All day on New Year's Day;
- t. The night shift on New Year's Day.

The Contractor shall submit the following with regards to the Construction Schedule:

1. Arrange schedule to indicate required sequencing of work as outlined below and in the Contract Documents, and to indicate time allowances for submittals, inspections, and similar time margins.
2. Schedule shall reflect Contractor's modifications and suggested revisions to work sequencing indicated in the Contract Documents. The Engineer/the Airport reserves the right to approve or disapprove such modifications or revisions.
3. Review and recognition of this schedule shall not relieve the Contractor of responsibility for scheduling of the work and maintaining progress in accordance with the Contract Documents. Schedule shall be submitted and reviewed for comment by Engineer and Owner for conformance to Critical Milestone Completion Dates and overall project completion time criteria. Lack of this information shall be cause for rejection of schedule. Partial payment requests will not be processed without a revised Critical Path Method (CPM) schedule.
4. In addition to the construction related work items, the following shall be included:
 - Critical submittal dates related to each activity or prepare separate coordinated listing of critical submittal dates.
 - Sequences of work within each activity that involves purchase lead-time, mock-ups, testing, or similar phases, as well as installation.
 - The CPM Construction Schedule shall relate to the entire project to the extent required by the Contract Documents and shall provide for expeditious and practicable execution of the work.
5. The following items define the term "activities" as it pertains to the Trades in the Contractor's CPM network.
 - Each activity shall be a unit of work that requires an amount of time for its performance.
 - Each activity shall be a logically separate part of the work, defined by an observable start and an observable finish.
 - To establish the scope of an activity for CPM purposes, Trade Contractor shall form a single activity from the largest grouping of related operations which permit a continuous and measurable flow of work and which can proceed without affecting or being affected by work of another Trade Contractor.
 - The scope of an activity shall be small enough to permit a reasonable appraisal of its status or as directed by the Engineer.
 - Activities of other Contractors or other subcontractors that must be completed prior to the start of the Trade Contractor's work or portion of work shall be included in the Trade Contractor's schedule as milestones and identified with a designation approved by the Construction Manager.
6. The following information shall be furnished on the network diagram for each activity in the Trade Contractor's schedule:
 - Description of the activity.
 - Duration of the activity in days.
 - Each activity shall be identified with early/late start, early/late finish, and total float.

30.03 SHOP DRAWINGS AND SUBMITTALS

The Contractor shall furnish digital copies of shop drawings and submittals to allow the Engineer two (2) weeks for review. The Engineer will review all shop drawings and submittals for general compliance with the Contract Documents and no responsibility is assumed for correctness of

dimensions or details. The engineer will indicate his action taken in response to the submittal or shop drawing by affixing a review stamp and indicating the action as follows:

"No exceptions taken," which means reviewed for construction, fabrication or manufacturer, subject to the provision that the work shall be in accordance with the requirements of the Contract Documents. Final acceptance of the work shall be contingent upon such compliance.

"Make corrections noted," which means unless otherwise noted on the drawings reviewed for constructing, fabrication or manufacture, subject to the provision that the work shall be carried out in compliance with all annotations or corrections indicated and in accordance with the requirements of the Contract Documents. Final acceptance of the work shall be contingent upon such compliance.

"Revise and resubmit," which means the review as noted is valid, and a corrected submittal is required.

"Rejected," which means that deviations from the requirements of the contract exist in the submittal such that no work based on such drawings or submittal shall be constructed, fabricated, or manufactured. The contractor shall revise the drawing in compliance with the engineer's annotations and pursuant to all requirements of the contract and shall resubmit the drawing or submittal to the engineer for another review.

The Contractor shall submit for review, a proposed schedule of submittals, shop drawings, working drawings, supplemental drawings, product data and samples as necessary to control the work adequately. An example partial list of submittals has been made and the list may not be complete and may be revised from time to time as the project progresses, as follows:

1. Operation and Maintenance Manuals.
2. Names and Resumes of Superintendent and Staff.
3. Contractor's Construction Schedule.
4. Updated Contractor's Construction Schedule.
5. A Submittal Schedule.
6. Material Status Report.
7. Manpower Schedule.
8. A Schedule of Values*
9. Contractor's Emergency Name and Phone Number List*
10. A List designating those portions of the work to be performed by subcontractors and the Contractor's own forces.
11. A List of Subcontractors (submitted with the bid)/Material Suppliers with an Experience Statement.
12. A Lien Release documenting that all Subcontractors and Material Suppliers have been paid for the previous months work, monthly submission required.
13. Written Safety Program for the work.
14. Copy of all Subcontracts, including Material Suppliers.
15. Duplicate Original Certified Payroll Reports and Statement of Compliance, with sworn affidavits from the Contractor.
16. A List of Proposed Construction Equipment*

17. Construction Cost Information, as requested by the Engineer.
18. Three (3) week look ahead Project Schedule at Weekly Construction Meetings.
19. Contractor Certification that the Initial Verification of the Control Points established are acceptable.
20. Contractor Certification of Calculations and Measurements to fully support the derivation of all Monthly Pay Quantities.
21. A Barricade/Temporary Fencing Plan and Traffic Control Plan*.
22. A Safety Plan Compliance Document (SPCD).*
23. Contractor's Quality Control Plan, to be submitted 5-days prior to the Pre-Construction Conference.*
24. Contractor's Quality Control Records, including Daily Inspection Reports and Daily Test Reports, to be submitted daily.
25. Asphaltic Concrete Pavement Mix Design(s). (If applicable)
26. Certified Test Results for the Asphalt Concrete. (If applicable)
27. Contractor's Affidavit Regarding Settlement of Claims.
28. Submit a Disadvantaged Business Enterprise (DBE) utilization percent obtained for the project.
29. Submit an original Affidavit acknowledging that all Subcontractors, Material Suppliers, Payrolls, Bills for Materials and Equipment, and other indebtedness connected with the work have been paid or otherwise satisfied.
30. An original Certificate evidencing that Insurance required by the General Conditions to the Construction Contract is currently in effect and will not be canceled or allowed to expire until at least 30-days prior written notice has been given to the Owner.
31. A written statement that the Contractor knows of no reason that the insurance will not cover the period required by the General Conditions to the Construction Contract.
32. A written consent of the Surety to Final Payment.
33. Record Drawings with a licensed surveyor's certification that the drawings are accurate and complete.
34. An original, with notary signature, Full and Final Release and Waiver on Liens from the Contractor and for each Subcontractor and Material Supplier, that documents that they have been paid in full.
35. Certificate of Completion.
36. Written 1-year Warranty, due at final completion.

*Indicates the submittal is due at the Pre-Construction Conference.

Each submittal shall be numbered sequentially and shall be submitted in accordance with the above schedule, as amended from time to time, so as to cause no delay in the work schedule.

The Contractor shall certify each submittal and shop drawing by providing an original letter (on Contractor's letterhead) to the Engineer that he has reviewed and approved the submittal and that it conforms to the requirements of the Contract Documents before it is submitted to the Engineer.

If this original certification is not included, the submittal and/or shop drawing will be returned without action. At the time of each submittal, the Contractor shall define and delineate in writing, separate from the certification, any deviations from the Contract Documents. If the Engineer



accepts this deviation, he will authorize the deviation by issuing a change order or if the deviation is minor by endorsement to the letter.

The Engineer's review will be only for general conformance with the design concept of the work and for compliance with the information contained in the Contract Documents. The review of a specified item, as such, will not indicate review of the assembly or in which the item functions. Review by the Engineer will not relieve the Contractor from responsibility for any errors or omissions in the submittals or shop drawings nor from his responsibility for complying with the Contract Documents. The only exception is deviations accepted in accordance with the preceding paragraph.

END SECTION 30



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SECTION 40 CONTROL OF WORK

40.01 DAMAGE TO EXISTING PROPERTY

Contractor will be held responsible for any damage to existing structures, work, materials, or equipment because of his operations and shall repair or replace any damaged structures, work, materials, or equipment to the satisfaction of, and at no additional cost to the Owner. The contractor shall record a video of the construction site, adjacent areas, staging yard, and fencing.

Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other work necessary for such protection. Contractor shall be responsible for all damage to street, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, fences, or other public or private property, which may be caused by transporting equipment, materials, or men to or from the work. Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement.

40.02 QUALITY CONTROL

All Quality Control testing and requirements identified within the Federal General Provisions and Federal Technical Specifications, or as needed to meet the requirements of this project, shall be performed by the contractor and/or his subcontractor and in no way shall the contractor depend on quality assurance testing or results for the performance of his work. All Quality Control testing and requirements identified within the Federal General Provisions and Technical Specifications, or as needed to meet the requirements of this project, shall be considered incidental to the project.

40.03 STORAGE OF MATERIALS AND EQUIPMENT

Equipment and stockpiled materials may be stored in the Contractor's Staging and Storage Yard on the project site provided they are kept below a maximum height of four feet (4') and not within any safety areas or Part 77 surfaces shown on the plans. Airport Operations shall approve all areas of storage.

40.04 ACCESS ROADS

The Contractor shall establish and maintain permanent and temporary access roads to various parts of the site as required in the drawings or as required to complete the project. Such roads shall be available for the use of all others performing work or furnishing services in connection with the project. Approval of the Engineer is required for all desired locations. The Contractor shall videotape all access and haul roads to be used by the Contractor prior to the start of construction, which will be reviewed by the Resident Engineer and Contractor together. The Contractor will be required to maintain all access roads and haul routes during construction and return to original condition at completion of construction all access roads and haul routes used during the course of the work.

40.05 FENCES

The Contractor shall maintain all existing and temporary fences and gates affected by the work until completion of the work. Fences and gates that interfere with construction operations shall not be relocated or dismantled until written permission is obtained from the Owner, and the period the fence may be left relocated or dismantled has been agreed upon. On completion of the work, the Contractor shall restore all fences to their original or to a better condition and to their original location or as indicated on the drawings.

At fence and gate construction locations, prior to removal/demolition operations that affect the integrity of the airport perimeter, temporary fencing must be installed between the work zone and airside, connected to secure sections of fence at each end of the work zone. Temporary fence must be of adequate design to positively control pedestrian access to the airfield and must be acceptable to the Airport.

40.06 PARKING

The Contractor shall provide and maintain suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the project, as required to avoid any need for parking personal vehicles where they may interfere with public traffic, Owner's operations, or construction activities. The Contractor's parking area will be located at the staging area upon approval of the Airport for security access. Vehicles with access into the Airport property require insurance.

40.07 DUST CONTROL

The Contractor shall take reasonable measures to prevent unnecessary dust. Earth surfaces subject to dusting shall be kept moist with water or by application of a chemical dust suppressant. Dusty materials in piles or in transit shall be covered to prevent blowing. Suitable dust screens shall protect existing or new machinery, motors, instrument panels or similar equipment. Proper ventilation shall be included with dust screens.

40.08 DRAINAGE PROVISIONS

The Contractor shall provide for the drainage of stormwater and such water as may be applied or discharged on the site in performance of the work. Drainage facilities shall be adequate to prevent damage to the work, the site, and adjacent property. Existing drainage channels and conduits shall be cleaned, enlarged or supplemented as necessary to carry all increased runoff attributable to Contractor's operations. Dikes shall be constructed as necessary to divert increased runoff from entering adjacent property (except in natural channels), to protect Owner's facilities and the work, and to direct water to drainage channels or conduits.

40.09 EROSION CONTROL

Contractor shall prevent erosion of soil on the site and adjacent property resulting from his construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operation that will disturb the natural protection. Work shall be scheduled to expose areas subject to erosion for the shortest possible time. Temporary storage and construction buildings shall be located, and construction traffic routed, to minimize erosion.

40.10 POLLUTION CONTROL

Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris and other substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris or other substance will be permitted to enter sanitary sewers and reasonable measures will be taken to prevent such materials from entering any drain or watercourse.

40.11 EXCESS MATERIAL

Unsuitable material, broken asphaltic concrete, construction debris, shall be removed from the project and disposed of at an offsite location (landfill) by the Contractor at the Contractor's expense in accordance with the plans and specifications.

40.12 CONSTRUCTION DEBRIS

The Contractor shall use his own forces and equipment to legally dispose of site refuse or construction debris at an offsite location (landfill).

40.13 CLEAN-UP

The Contractor shall upon completion of the work remove all temporary construction facilities, debris, and unused materials provided for in the work, and restore the site of the work and public right-of-way in a neat and clean condition.

40.14 WEEKLY PROGRESS MEETINGS

The Engineer will conduct weekly Progress Meetings at regularly scheduled times convenient for all parties involved. A three (3) week look-ahead schedule will be developed by the Contractor prior to the start of the meeting and will be discussed by the Contractor during a portion of the agenda. Additionally, discussions will address administrative and technical issues of concern, determining resolutions and development of deadlines for resolution within allowable time frames.

As may be required by the Engineer, in addition to representatives of the Airport and the Contractor, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities may be represented at these meetings by individuals directly involved with the Contract and authorized to conclude matters relating to progress.

During the weekly construction meeting, corrections made (if any) and approval of the meeting minutes of the previous progress meeting, prepared by the Engineer, will be reviewed. The meeting minutes may be recorded and will document issues of significance including submittals, schedules, quality control, issues encountered, and the assignment of responsibilities for future action. Other items of significance that could affect progress may be discussed, and the meeting will include topics for discussion as appropriate to the current status of the project.

Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

Review the present and future needs of each entity present, including such items as:

1. Work Schedule and Hours of Work
2. Quality and Work Standards
3. Access and Limitation
4. Submittal Status
5. Requests for Information
6. Non-Compliance Notices
7. Status on Certified Payroll Reports
8. Change Orders and/or Extra Work
9. Housekeeping

The Engineer may tape record the meeting and the Engineer will distribute a copy to the Owner and Prime Contractor. The Prime Contractor shall be responsible to distribute the meeting minutes to subcontractors, suppliers, and others affected by decisions or actions resulting from each meeting.

40.15 CONSTRUCTION SURVEYING LAYOUT

The Contractor shall be fully responsible for all construction surveying and staking required for the completion of this project, including but not limited to the following: all construction stakes establishing lines, grades, and elevations to include necessary utilities and appurtenances and shall be responsible for their conformance with plans and specifications. The Contractor shall furnish all materials, personnel and equipment necessary to perform all surveying, staking and verification of the accuracy of all existing control points, which have been provided in the plans. Included in this work shall be all calculations required for the satisfactory completion of the project in conformance with the plans and specifications. The work shall include establishing and marking "Record Drawings" coordinates and elevations on survey monuments and other designated locations. The work shall be done under the direction of a registered land surveyor employed by the Contractor. All survey crew chiefs shall be one of the following: a registered Civil Engineer, a registered Land Surveyor, an Engineer-in-Training, or a NICET Level III (or a higher NICET level) certified technician.

Materials and equipment shall include, but shall not necessarily be limited to, vehicles for transporting personnel and equipment, properly adjusted and accurate survey equipment, straightedges, stakes, flagging and all other devices necessary for checking, marking, establishing

and maintaining lines, grades and layout to perform the work called for in the contract. The Contractor shall furnish a sufficient quantity of competent personnel to perform the survey work and layout. The Contractor shall not employ nor engage the services of any person or persons in the employ of the Engineer or the Fremont County Airport for the performance of any work as described herein.

There will be no separate measurement or payment for any work, materials, or labor required for construction staking or the production of as-built/record drawings but shall be considered incidental to the project.

a. Field Books. The Contractor shall furnish and use bound field books for recording survey data and field notes. These books shall be available for inspection by the Engineer at any time and shall become property of the Owner upon completion of the work.

b. Initial Verification. Prior to setting any construction stakes, the Contractor shall first verify the accuracy of the control points established by the Engineer. If errors are discovered during this verification process, and the control points do not agree with the geometry shown in the plans, the Contractor shall immediately notify the Engineer in writing, explaining the issue in detail. The Engineer will advise the Contractor within five (5) working days of any corrective actions, which may be deemed necessary. Secondly, upon completion of this verification process, the Contractor's registered Land Surveyor shall certify in writing, that all control points established by the Engineer are acceptable and adequate to allow the Contractor's construction staking to meet the accuracy requirements of the specifications.

c. General Description. After the Contractor's registered surveyor has submitted his written certification verifying the accuracy of the control points established by the Engineer, the Contractor shall set all stakes including, but not necessarily limited to: centerline stakes, offset stakes, reference point stakes, slope stakes, pavement lines, curb lines and grade stakes, stakes for sewers and waterlines, airfield drainage, pipe, underdrains, clearing, survey monuments, blue tops for subgrade, base and pavement courses, paint striping layouts, supplement bench marks and permanent as-built elevation marks, as-built survey elevations of concrete pavement and asphalt base under concrete pavements at each concrete paving joint intersection, and the as-built elevations prior to placing the base course shall be obtained as well as all other horizontal or vertical controls necessary for complete and accurate layout of the construction work, and submitted to the Engineer.

d. Preservation. The Contractor shall exercise care in the preservation of stakes, references and benchmarks and shall reset them when any are damaged, lost, displaced or removed. Station and offset reference stakes shall be installed and maintained at all times on each side of the storm drain centerline.

e. Discrepancies. Any discrepancies in the grade, alignment, quantities, locations or dimensions detected by the Contractor shall immediately be brought to the attention of the Engineer. Changes to the project plans will not be allowed without the written approval of the Engineer.

f. Random Inspections. The Engineer reserves the right to make inspections and random checks of any portion of the staking and layout work. If, in the Engineer's opinion, the work is not

being performed in a manner that will assure proper controls and accuracy, he may order any or all of the staking and layout work re-done, or he can order further staking to supplement the original work, both of which would be at no additional cost to the Airport.

g. Special Staking Requirements. Utility adjustments if a part of the Contract; require the Contractor to perform all layout work and set all control points, stakes and reference necessary for carrying out all such adjustments.

h. Monthly Pay Quantities. Measurement of all pay quantities will be the responsibility of the Airport. However, the Contractor shall furnish the Engineer for each pay period, a certified set of his own calculations and measurements to fully support the derivation of all pay quantities.

i. Additional Work. If additional staking and layout are required as the result of additional work ordered by the Engineer, such work will be paid at the respective predetermined unit prices bid by the contractor specified herein. The amount per hour for a two (2) person or three (3) person survey party, a survey manager and a registered land surveyor includes the cost of all work necessary to complete the extra work, including the Contractor's overhead, profit, bond, insurance and sales tax and extended general condition costs.

j. Measurement. Survey will not be measured for payment. Travel time shall not be measured for payment. Survey work for quality control surveys shall not be measured for payment but shall be considered incidental to the project.

40.16 SAMPLING AND TESTING

Raw and in-place material sampling and testing shall be completed by the contractor in accordance with the Technical Specifications and the Contractor Quality Control Plan.

40.17 AS-BUILT RECORD DRAWINGS

The Contractor shall keep one or more copy of all specifications, plans, addenda, modifications, working drawings and shop drawings at the site, and in good order. One of the sets of plans shall be annotated by the Contractor to show all changes made during the construction process as they occur. Upon completion of the project and prior to submittal of the final application for payment, the annotated set of plans showing the "as-built" work together with any annotated working and shop drawings of significance shall be delivered to the Engineer for the Owner's record. At a minimum, the Contractor shall provide as-built elevations for each spot grade that is shown on the plans for finished pavement, finished ground, storm drain inverts and rim elevations; and as-built measurements for coordinates, slopes, horizontal dimensions, and station and offsets for improvements shown on the plans. The Contractor shall provide stations and offsets for each handhole, manhole, light base, catch basin or other similar structure on the annotated set of as-built drawings.

Furthermore, the Contractor shall have the Contractor's registered Surveyor stamp the cover sheet of the final as-built drawings after the completion of the project and before submittal to the Engineer certifying the contractor's as-built plans.

END SECTION 40

SECTION 50 UTILITIES AND EXISTING FACILITIES

50.01 GENERAL

This item shall govern the field location of all underground existing utilities in areas to be improved, to avoid conflicts with proposed surface or underground improvement. Work under this section shall include, but not be limited to, the location of all underground facilities. Underground facilities means any item that is buried or placed below ground for use in connection with the storage or conveyance of water, sewage, electronic, telephone or telegraphic communications, electric energy, oil, gas or other substances, and shall include, but not be limited to pipes, sewers, conduits, cables, valves, lines, wires, manholes, attachments and those portions of poles and their attachments below ground, including electrical and communication ducts, airfield lighting and control cables, fiber optic lines, storm drains, electrical and telephone lines. The Contractor shall employ a private utility location service to locate the existing Owner and non-Owner utilities prior to starting the work. The Contractor shall pothole and use prudent care when excavating and locating said utilities.

The Contractor is to protect all existing facilities during construction. The Contractor shall notify the appropriate Utility Company or agency of any construction that may affect their facilities.

50.02 WATER FOR CONSTRUCTION PURPOSES

The Contractor, at his expense, shall provide all water required for, and in connection with, the work to be performed. The Contractor shall remove all temporary waterlines installed by him, after completion of the work, if directed to do so by the Engineer.

It is the Contractor's responsibility to identify the water source and its compatibility, storage, and costs for all water requirements for this project. The Contractor must submit a water source and its intended use to the Engineer for approval. No direct payment will be made for construction water. The cost thereof shall be included in other items for which direct payment is made.

50.03 ELECTRICAL POWER

All power for lighting, operation of Contractor's plant or equipment, or for any other use as may be required in the execution of the work to be performed under the provision of these Contract Documents shall be provided by the Contractor at his expense. The Contractor shall remove all temporary electrical facilities installed by him, after completion of the work, if ordered to do so by the Engineer.

50.04 SANITARY FACILITIES

Contractor shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and other performing work or furnishing services on the Project. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 10 men. Contractor shall enforce the use of such sanitary facilities by all personnel at the site.

END SECTION 50



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SECTION 60 OPERATIONS, SAFETY AND SECURITY

60.01 AIRPORT SECURITY REQUIREMENTS

The work area for this project comprises the Airport infield. Equipment and workmen will be restricted to the work area defined on the plans. Any violation by Contractor's personnel or subcontractors will subject the Contractor to penalties imposed by the FAA and/or the Airport. The Contractor shall be responsible for the protection of the construction site, and all work, materials, equipment, and existing facilities thereon.

The Contractor's responsibilities for work areas are as follows:

1. The Contractor shall be held responsible for controlling his employees, subcontractors, and their employees with regard to traffic movement.
2. The Contractor shall rebuild, repair, restore, and make good at his own expense all injuries or damages to any portion of the work occasioned by his use of these facilities before completion and acceptance of his work.
3. The Contractor shall submit to the Engineer in writing a detailed work plan for each construction phase. The work plan shall include, but not be limited to, temporary electrical facilities and paving/seal sequence. This plan shall be submitted prior to the start of each construction phase. No work within the construction phase may commence until the phase work plan is approved.
4. The Contractor shall submit to the Engineer in writing a plan, by construction phase, for controlling construction equipment and vehicular movements in the Air Operations Area (AOA). This plan shall be submitted at the Pre-Construction Conference. No work may commence until this plan is approved. The Plan must include material haul roads.
5. Any time construction occurs within airport property, the Contractor shall be responsible for assuring that no breaches of airport property occur through his respective construction access gate. Restricted areas are fenced and must remain fenced at all times. The gates will remain closed and locked or a guard will be provided at the Contractor's expense. The Contractor will furnish the guard with a roster of his personnel and ensure that each individual has adequate identification. The duplicate keys for each lock will be turned over to the airport.

60.02 AIRPORT SAFETY REQUIREMENTS

a. Operating Construction Vehicles on the Airport

No vehicle shall enter the contractor worksite unless the following conditions are met:

- The driver is authorized to access the worksite.
- The driver possesses a valid driver's license.
- The vehicle is properly marked with the company name.
- Vehicle is marked with lighted beacon or checkered flag or under escort.

- Transient haul truck drivers are to be escorted on and off the airport.

b. Prohibited Vehicles

The use of motorcycles, bicycles, two-wheeled motor scooters and privately-owned vehicles within the worksite is strictly prohibited.

c. Vehicle Condition

Vehicles must be in good mechanical condition with operational lights, horn, brakes, and clear visibility from the driver's seat. Trailers and semi-trailers must be equipped with proper brakes so that when disengaged from a towing vehicle, neither aircraft engine blast nor wind will cause them to become free rolling.

d. Compliance

All traffic within the Airport Restricted Area and/or contractor worksite must comply with any lawful order, signal or direction of any Airport employee. When such traffic is controlled by signs or pavement markings, such symbols shall be obeyed, unless otherwise directed by an officer or agent of the Airport.

e. Night or Low Visibility Operations

All vehicle headlights, taillights, and running or clearance lights shall be in operational condition. Headlights shall be used at all times.

f. Construction Vehicle and Equipment Markings

All construction equipment and vehicles shall have flashing yellow lights, mounted at the highest point, during nighttime, and a 3' x 3' orange and white checkered flag or a flashing amber beacon during daytime. All vehicles and equipment on the construction site shall have company designations visibly displayed. No personal vehicles will be allowed in the work area. All construction vehicles and equipment must have the company name and/or logo and vehicle number at least four (4) inches in height on each side of the vehicle.

g. Operation of Vehicles

No vehicle shall operate within the Airport Restricted Area:

- In a careless or negligent manner.
- With disregard of the rights and safety of others.
- At a speed or in a way which endangers persons or property.
- While the driver is under the influence of drugs or alcohol.
- If such vehicle is loaded or maintained as to endanger persons or property.

h. Speed Limits

The speed limit on the perimeter roads is 15 miles per hour. The speed limit on the haul route is 15 miles per hour.

i. Vehicle Accidents

Each operator of a motor vehicle involved in an accident on the airport that results in damage to property or personal injury shall first contact 9-1-1 and then report it fully to the Airport as soon as possible after the accident. The report must include the name and address of the person reporting. Copies of reports taken by Fremont County are acceptable for incidents that occur in the public areas of the airport.

j. Hearing Protection

Contractor personnel working on or adjacent to the AOA are encouraged to wear hearing protection.

k. Worker Injuries

In the event of a serious injury requiring medical attention, call **9-1-1** and notify the operator you are at the Fremont County Airport. All injuries must also be reported to the Airport as soon as possible.

l. After Hours Contacts

The Contractor shall submit to the Engineer a list of personnel who can be contacted 24 hours a day, seven (7) days a week and can respond in a reasonable time frame regarding any possible emergency on the work site. The list must include names, job titles and phone numbers.

m. Daily Site Inspections

Prior to the Contractor leaving the worksite for the day, an inspection of the site shall be completed. All discrepancies noted in the inspection must be corrected to the satisfaction of the Engineer prior to the Contractor leaving the worksite.

n. Deliveries

All deliveries for the Contractor shall be received by the Contractor. Deliveries will not be accepted by anyone other than the Contractor. The Airport and its authorized representatives will not accept or be responsible for deliveries.

o. Runway and Taxiway Closures

There will be no planned Runway and Taxiway closures during construction. All construction-related surface closures will be controlled as shown on the Phasing Plans and the CSPP for the project.

p. Haul Routes

The Contractor and his personnel and all other vehicles shall remain on the designated haul routes as approved by the Airport or Engineer.

q. Cranes or Mobilized Equipment

The Contractor shall review the Construction Phasing Plans and requirements in the *Construction Safety and Phasing Plan* for the submittal of 7460-1 forms to the FAA for approval of equipment that could impact the CFR Part 77 Surfaces.

All activities involving cranes or mobilized vehicles exceeding 15 feet in height on or near the AOA require 48-hour advance coordination with Airport Operations. The following information is required:

- Location of equipment
- Maximum extendable height
- Duration of use
- Daily hours of operation
- Whether or not the crane can be lowered when not in use

Equipment must be lowered to its stowed height when not in use or as otherwise directed. The **highest point** of each piece of equipment shall be marked by a 3' x 3' orange and white checkered flag. At night and during periods of low visibility, the highest point of the crane must be marked by a red obstruction light. Crews must be prepared to remove equipment promptly if so directed.

r. Runway Safety Areas

Construction will not occur within the RSA during this project.

s. Staging & Storage Area

All contractor materials, equipment and supplies shall be within the contractor's designated staging and storage area. All staging and storage areas shall be marked, debris boxes covered and area kept neat and clean of debris.

For equipment that must remain in the work area, the following conditions must be met:

- Be located outside of the runway/taxiway safety and obstruction free areas.
- Be marked with lighted barricades around the equipment perimeter with a spacing of no more than 10 feet.
- Be coordinated at least 48 hours in advance with the Engineer.
- The highest point of the equipment marked and lit with a red flashing/steady burning omni-directional obstruction light.

t. Barricades & Lighting

The perimeters of the actual work areas, all uneven surfaces, mounds and excavations shall be adequately barricaded with vertical panel barricades, low level barricades and lighted with omni-directional flashing red lights to prevent intrusion by taxiing aircraft, equipment and vehicles. Low profile barricades shall be supplemented with flashing high intensity red lights. Low level barricades shall be orange and white in color and shall be a minimum of six (6) feet in length and ten (10) inches in height. All cones and other marking devices must be lighted or equipped with reflectors during periods of darkness as directed by the Airport.

The Contractor will be responsible for placing and maintaining the low-profile barricades. The Contractor will provide a 24/7 point of contact capable of responding within one (1) hour to address issues with the barricades. The airport will supply the low-profile barricades for this project.

All barricades must be maintained and kept in proper working order by the Contractor. All burnt out lights or inoperative batteries must be replaced immediately. Barricades and cones must remain upright at all times.

The placement of sandbags on barricades may be required in situations of adverse weather. In addition, the Contractor must keep an adequate supply of extra barricades, lights and batteries on site. Escorts for barricade maintenance must be provided by the Contractor or coordinated in advance with the Airport.

Only red, battery-powered or approved solar-powered, omni-directional lights are acceptable within the Restricted Area of the airport.

u. Trenches and Excavations

Contractors shall close trenches located within active safety areas at the end of each workday. No open trenches or excavations will be allowed within the following active safety areas without prior coordination and approval with the Engineer:

- Open trenches not to exceed 500 feet in length at any one time.
- Spoils from excavations are to be placed on the runway/taxiway side that is closest to the trench.
- Spoils length not to exceed 500 feet in length at any one time.
- Spoil height is not to exceed 4 feet or any height that would cause a visual obstruction.
- Spoils not returned to the trench or removed from the worksite are to be properly marked with lighted barricades with a spacing of no more than 8' or that to properly delineate the trench.

v. Stockpiled Material

Stockpiled materials are allowed only within the Contractor's designated staging & storage areas.

- Remove daily all stockpiled material from within aircraft movement areas, unless otherwise directed by the Engineer.
- No excavated or stored materials may remain within active runway or taxiway safety areas and object free zones.

w. Stockpiled material may be located within the Air Operations Area only upon prior coordination and approval of the Engineer

x. Haul Trucks

All haul trucks and delivery trucks are required to be escorted on the airport at all times.

y. Weapons

No person, except a peace officer, authorized air carrier employee, airport employee or a member of an armed force of the United States on official duty, shall carry any weapon, explosive, or inflammable material on or about his person, openly or concealed, on airport property. No person shall furnish, give, sell, or trade a weapon on airport property.

60.03 TRAFFIC CONTROL, BARRICADING, AND CLEANUP

General Requirements:

The Contractor shall submit a Cleanup Plan for approval by the Owner to be followed at the close of each day's work. At a minimum, the Plan shall include an itemized, detailed list of tasks and equipment to be used to properly clear all areas within Runway and Taxiway Safety Areas in accordance with FAA AC 150/5370-2 (latest revision). The Plan shall specifically identify all work to be performed on a daily basis for each Phase of construction identified on the plans. The Plan shall also include the requirement of the Contractor and Engineer to perform a site walk of the entire effected area of construction a minimum of 2 hours before that area is scheduled to be reopened to aircraft traffic to assure that it has been cleaned and cleared of all equipment and debris in accordance with FAA AC 150/5370-2 (latest edition).

The Contractor shall also be responsible for delineating the limits of construction operations consistent with the approved Phasing and Barricading Safety Plan(s) and/or as directed by the Airport. The Contractor shall submit a *Safety Plan Compliance Document* (SPCD) as required in the Airport's Construction Safety Plan.

The Contractor shall be responsible for providing, the installation of, and the maintenance of barricades and traffic control devices necessary for the control of aircraft, vehicular, and pedestrian traffic. Any requests to modify the approved barricading and phasing plans must be submitted to the Airport for review and approval.

The SPCD must be submitted by the Contractor prior to, or no later than, at the Pre-Construction Conference.

There will be no separate measurement or payment for the airfield safety and security items as identified in this section but shall be considered incidental to the project; and shall include all labor, materials, tools, equipment, and incidentals necessary to complete the work as shown on the plans and included in the contract documents including the Technical Specifications.

END SECTION 60



**FAA
Airports**

DIVISION III

FEDERAL ASSURANCES

FREMONT COUNTY AIRPORT

1V6 AWOS Replacement

FAA AIP No: 3-08-0009-025-2025

Contract Provision Guidelines for Obligated Sponsors and Airport Improvement Program Projects

(Issued on May 24, 2023)

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A1 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.

A2 AFFIRMATIVE ACTION REQUIREMENT

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY

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:

Timetables

Goals for minority participation for each trade:	N/A
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 also is subject to the goals for both its federally involved and nonfederally 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 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 of the 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 the 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” is Colorado, Fremont County, Penrose.

A3 BREACH OF CONTRACT TERMS

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 the 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.

A4 BUY AMERICAN PREFERENCE

FAA BUY AMERICAN PREFERENCE

The Contractor certifies that its bid/offer is in compliance with 49 USC § 50101, BABA and other related Made in America Laws,¹ U.S. statutes, guidance, and FAA policies, which provide that Federal funds may not be obligated unless all iron, steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration 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.

The bidder or offeror must complete and submit the certification of compliance with FAA's Buy American Preference, BABA and Made in America laws included herein with their bid or offer. The Airport Sponsor/Owner will reject as nonresponsive any bid or offer that does not include a completed certification of compliance with FAA's Buy American Preference and BABA.

The bidder or offeror certifies that all constructions materials, defined to mean an article, material, or supply other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; or drywall used in the project are manufactured in the U.S.

Certification of Compliance with FAA Buy American Preference – Equipment/Building Projects

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, and other Made in America Laws, U.S. statutes, guidance, and FAA policies 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, BABA and other related U.S. statutes, guidance, and policies of the FAA by:
- a) Only installing steel and manufactured products produced in the United States;
 - b) Only installing construction materials defined as: an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used

¹ Per Executive Order 14005 "Made in America Laws" means all statutes, regulations, rules, and Executive Orders relating to federal financial assistance awards or federal procurement, including those that refer to "Buy America" or "Buy American," that require, or provide a preference for, the purchase or acquisition of goods, products, or materials produced in the United States, including iron, steel, and manufactured products offered in the United States.

in fiber optic cables); glass (including optic glass); lumber or drywall that have been manufactured in the United States.

- c) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
- d) 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:

- a) To provide to the Airport Sponsor or FAA evidence that documents the source and origin of the steel and manufactured product.
- b) To faithfully comply with providing U.S. domestic product.
- c) To furnish U.S. domestic product for any waiver request that the FAA rejects.
- d) 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 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for a Type 3 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

- a) To submit to the Airport Sponsor or FAA within 15 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that supports the type of waiver being requested.
- b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the proposal.
- c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
- d) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 2 Waiver (Nonavailability) - The iron, steel, manufactured goods or construction materials are not available in sufficient quantity or quality in the United States. The required documentation for the Nonavailability waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire
- b) Record of thorough market research, consideration where appropriate of qualifying alternate items, products, or materials including;
- c) A description of the market research activities and methods used to identify domestically manufactured items capable of satisfying the requirement, including the timing of the research and conclusions reached on the availability of sources.

Type 3 Waiver – The cost of the item components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the “item”. The required documentation for a Type 3 waiver is:



- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
- b) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. 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).
- c) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
- d) 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 (Unreasonable Costs) - Applying this provision for iron, steel, manufactured goods or construction materials, would increase the cost of the overall project by more than 25 percent. The required documentation for this waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire from
- b) At minimum two comparable equal bidders and/or offerors;
- c) Receipt or record that demonstrates that supplier scouting called for in Executive Order 14005, indicates that no domestic source exists for the project and/or component;
- d) Completed waiver applications for each comparable bid and/or offer.

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



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A5 CIVIL RIGHTS - GENERAL

GENERAL CIVIL RIGHTS PROVISIONS

In all its activities within the scope of its airport program, the Contractor agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

The above provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract.

A6 CIVIL RIGHTS – TITLE VI ASSURANCE

Title VI Solicitation Notice:

Fremont County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that for 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 no businesses will be discriminated against on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in consideration for an award.

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 USC § 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 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq.*), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq.*) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-259) (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 (42 USC § 12101, et seq) (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) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 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 (ensures nondiscrimination 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. 74087 (2005)];
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC § 1681, et seq).

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 Acts 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. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability 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.

A7 CLEAN AIR AND WATER POLLUTION CONTROL

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 USC §§ 7401-7671q) and the Federal Water Pollution Control Act as amended (33 USC §§ 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 exceed \$150,000.



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A8 CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS

CONTRACT WORKHOURS 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 \$29 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.



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A9 COPELAND “ANTI-KICKBACK” ACT

COPELAND “ANTI-KICKBACK” ACT

Contractor must comply with the requirements of the Copeland “Anti-Kickback” Act (18 USC 874 and 40 USC 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.

A10 DAVIS-BACON REQUIREMENTS

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 § 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;

(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, U.S. Department of Labor, Washington, DC 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 the 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 that 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 <https://www.dol.gov/agencies/whd/government-contracts/construction/payroll-certification> 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, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, 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 Office of Apprenticeship Training, Employer and Labor Services 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 Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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 that 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.

6. Subcontracts.

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR §§ 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 § 5.5.

7. Contract Termination: Debarment.

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.

9. Disputes Concerning Labor Standards.

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).
- (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 USC § 1001.

A11 DEBARMENT AND SUSPENSION

CERTIFICATION OF OFFEROR/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that 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 confirm 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 Certification of Offeror /Bidder Regarding Debarment, above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the Federal Aviation Administration 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.

A12 DISADVANTAGED BUSINESS ENTERPRISE

Bid Information Submitted as a matter of responsiveness:

The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR § 26.53.

As a condition of responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

- 1) The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
- 2) A description of the work that each DBE firm will perform;
- 3) The dollar amount of the participation of each DBE firm listed under (1);

- 4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal
- 5) Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment; and
- 6) If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

Bid Information submitted as a matter of responsibility:

The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR § 26.53.

As a condition of responsibility, every Bidder or Offeror must submit the following information on the forms provided herein within five days after bid opening.

- 1) The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
- 2) A description of the work that each DBE firm will perform;
- 3) The dollar amount of the participation of each DBE firm listed under (1);
- 4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal;
- 5) Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment; and
- 6) If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

Contract Assurance (49 CFR § 26.13;)

The Contractor, subrecipient 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, which may include, but is not limited to:

- 1) Withholding monthly progress payments;
- 2) Assessing sanctions;
- 3) Liquidated damages; and/or

- 4) Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (49 CFR § 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 Fremont County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 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 Fremont County. This clause applies to both DBE and non-DBE subcontractors.

Termination of DBE Subcontracts (49 CFR § 26.53(f);)

The prime contractor must not terminate a DBE subcontractor listed in response to 1V6 AWOS Replacement (or an approved substitute DBE firm) without prior written consent of Fremont County. This includes, but is not limited to, instances in which the prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

The prime contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent Fremont County. Unless Fremont County consent is provided, the prime contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

Fremont County may provide such written consent only if Fremont County agrees, for reasons stated in the concurrence document, that the prime contractor has good cause to terminate the DBE firm. For purposes of this paragraph, good cause includes the circumstances listed in 49 CFR §26.53.

Before transmitting to Fremont County its request to terminate and/or substitute a DBE subcontractor, the prime contractor must give notice in writing to the DBE subcontractor, with a copy to Fremont County, of its intent to request to terminate and/or substitute, and the reason for the request.

The prime contractor must give the DBE five days to respond to the prime contractor's notice and advise Fremont County and the contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why Fremont County should not approve the prime contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), Fremont County may provide a response period shorter than five days.

In addition to post-award terminations, the provisions of this section apply to preaward deletions of or substitutions for DBE firms put forward by offerors in negotiated procurements.



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A13 DISTRACTED DRIVING

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 Federal Aviation Administration 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 subgrant.

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 \$10,000 that involve driving a motor vehicle in performance of work activities associated with the project.

A14 PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act [Public Law 115-232 § 889(f)(1)].

A15 DRUG FREE WORKPLACE REQUIREMENTS

Not Applicable.

A16 EQUAL EMPLOYMENT OPPORTUNITY (EEO)

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, sexual orientation, gender identity, 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 consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.



(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under this section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) 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.

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

(7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any such 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 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.

(8) The Contractor will include the provisions of paragraphs (1) through (8) 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 may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: *Provided*, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, 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 part 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 must 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 areas 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 nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must 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 therefor, 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 woman 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 work force.

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 group 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, the Contractor may be in violation of the Executive Order if a 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, sexual orientation, gender identity, 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 part 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 numbers, 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).

A17 FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, et seq, 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.



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A18 LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

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, subgrants, 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.

A19 PROHIBITION OF SEGREGATED FACILITIES

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 Employment 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, sexual orientation, gender identity, 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 Employment Opportunity clause of this contract.

A20 OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

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. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer 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 (29 CFR Part 1910). The employer 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.

A21 PROCUREMENT OF RECOVERED MATERIALS

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 products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

- 1) The contract requires procurement of \$10,000 or more of a designated item during the fiscal year; or
- 2) 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/smm/comprehensive-procurement-guidelines-construction-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.



A22 RIGHT TO INVENTIONS

Not Applicable.

A23 SEISMIC SAFETY

Not Applicable.



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A24 TAX DELINQUENCY AND FELONY CONVICTIONS

CERTIFICATION OF OFFEROR/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

- 1) 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.
- 2) The applicant represents that it is (☐) 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 USC § 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.



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A25 TERMINATION OF CONTRACT

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:

1. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
2. 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;
3. Reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
4. 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.

TERMINATION FOR CAUSE (CONSTRUCTION)

Section 80-09 of FAA Advisory Circular 150/5370-10 establishes standard language for conditions, rights, and remedies associated with Owner termination of this contract for cause due to default of the Contractor.

TERMINATION FOR CAUSE (EQUIPMENT)

The Owner may, by written notice of default to the Contractor, terminate all or part of this Contract for cause if the Contractor:

1. Fails to begin the Work under the Contract within the time specified in the Notice- to-Proceed;
2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;
3. Fails to make delivery of the equipment within the time specified in the Contract, including any Owner approved extensions;
4. Fails to comply with material provisions of the Contract;
5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements; or
6. Becomes insolvent or declares bankruptcy.

If one or more of the stated events occur, the Owner will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the Owner's discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default.

If within 10days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the Owner, the Owner has authority to acquire equipment by other procurement action. The Contractor will be liable to the Owner for any excess costs the Owner incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the Owner shall be at the Contract price. The Owner may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the Owner determines to be necessary to protect the Owner against loss because of Contractor default.

Owner will not terminate the Contractor's right to proceed with the work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the Owner determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the Owner issued the termination for the convenience the Owner.

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

A26 TRADE RESTRICTION CERTIFICATION

TRADE RESTRICTION CERTIFICATION

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

- 1) 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 (USTR);
- 2) 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 USTR; and
- 3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

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 USC § 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 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 public works project any product of a foreign country on such USTR 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 USTR, 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 (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.



A27 VETERAN'S PREFERENCE

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 USC § 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.

A28 DOMESTIC PREFERENCES FOR PROCUREMENTS

CERTIFICATION REGARDING DOMESTIC PREFERENCES FOR PROCUREMENTS

The Bidder or Offeror certifies by signing and submitting this bid or proposal that, to the greatest extent practicable, the Bidder or Offeror has provided a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including, but not limited to, iron, aluminum, steel, cement, and other manufactured products) in compliance with 2 CFR § 200.322.



DIVISION IV

FEDERAL WAGE DETERMINATIONS

FREMONT COUNTY AIRPORT

1V6 AWOS Replacement

FAA AIP No: 3-08-0009-025-2025

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 USC 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.

General Decision Number: CO20250012 01/03/2025

Superseded General Decision Number: CO20240012

State: Colorado

Construction Type: Highway

Counties: Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan and San Miguel Counties in Colorado.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).



If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$17.75 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 2025.
If the contract was awarded on or between January 1, 2015, and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number: 0 Publication Date: 01/03/2025

CARP9901-009 05/01/2024

	Rates	Fringes
CARPENTER (Excludes Form Work)	\$ 33.11	12.17

ENGI0009-016 05/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
(3)- Drill Rig Caisson (smaller than Watson 2500 and similar)	\$ 35.41	15.20
(4)-Mechanic La Plata County	\$ 35.58	15.20
(5)-Drill Rig Caisson (Watson 2500 similar or larger)	\$ 35.41	15.20

SUCO2011-007 09/15/2011

	Rates	Fringes
CARPENTER (Form Work Only)		
Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 18.57	5.38
La Plata	\$ 18.60	5.38



CEMENT MASON/CONCRETE FINISHER

Alamosa, Archuleta, Conejos, Custer, Delta, Dolores, Fremont, Gunnison,
Hinsdale, Mineral, Montezuma, Ouray, Rio Grande, Saguache, San Juan,

San Miguel	\$ 17.67 **	2.85
Chaffee	\$ 15.55 **	2.85
La Plata	\$ 18.99	2.85
Montrose	\$ 16.95 **	2.85

ELECTRICIAN \$ 28.06 8.76

GUARDRAIL INSTALLER \$ 12.78 ** 3.31

HIGHWAY/PARKING LOT STRIPING:

Truck Driver (Line Striping Truck) \$ 14.60 ** 3.49

HIGHWAY/PARKING LOT STRIPING:

Painter \$ 12.90 ** 3.07

IRONWORKER, REINFORCING

(Excludes Guardrail Installation)\$ 16.94 ** 6.77

IRONWORKER, STRUCTURAL

(Excludes Guardrail Installation) \$ 16.76 ** 6.01

LABORER

Asphalt Raker

Alamosa \$ 17.53 3.75

Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont,
Gunnison, Hinsdale, San Juan, San Miguel \$ 16.43 ** 3.42

La Plata \$ 15.38 ** 3.12

Common or General

Alamosa, Chaffee, Montezuma, Montrose \$ 12.44 ** 3.53

Archuleta, Conejos, Custer, Delta, Dolores, Gunnison,
Hinsdale, Ouray, Rio Grande, Saguache, San Miguel \$ 13.70 ** 3.53

Fremont \$ 15.19 ** 3.00

La Plata \$ 14.07 ** 3.53

Mineral \$ 14.84 ** 3.53

San Juan \$ 13.73 ** 3.53

Concrete Saw (Hand Held) \$ 16.00 ** 6.14

Landscape and Irrigation

Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores,
Fremont, Gunnison, Hinsdale, Mineral, Montezuma, Montrose,
Ouray, Rio Grande, Saguache, San Juan, San Miguel \$ 14.02 ** 3.16

La Plata \$ 13.54 ** 3.16

Mason Tender-Cement/Concrete

Alamosa, Archuleta, Conejos, Custer, Delta, Dolores, Fremont,



Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 14.59 **	3.10
Chaffee	\$ 12.44 **	3.10
La Plata	\$ 15.67 **	3.10
Traffic Control (Flagger)	\$ 9.42 **	3.21
Traffic Control (Sets Up/Moves Barrels, Cones, Install Signs, Arrow Boards and Place Stationary Flags)(Excludes Flaggers)	\$ 12.39 **	3.20
PAINTER (Spray Only)	\$ 17.54 **	3.52
POWER EQUIPMENT OPERATOR:		
Asphalt Laydown		
Alamosa, La Plata	\$ 22.67	8.72
Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 23.13	8.64
Asphalt Paver	\$ 22.67	8.72
Asphalt Plant	\$ 17.23**	4.07
Asphalt Roller		
Alamosa	\$ 21.67	8.22
Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, Mineral, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 22.77	8.36
La Plata	\$ 22.68	7.30
Montezuma	\$ 22.67	8.72
Asphalt Spreader	\$ 22.67	8.72
Backhoe/Trackhoe		
Alamosa	\$ 21.03	3.75
Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 19.75	3.75
La Plata	\$ 19.79	5.13
Mineral	\$ 19.17	5.53
Montezuma	\$ 16.42 **	4.42
Bobcat/Skid Loader		
Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 18.20	4.54
La Plata	\$ 19.98	4.88
Mineral	\$ 17.94	4.62
Broom/Sweeper		
Alamosa	\$ 20.67	9.22
Broom/Sweeper		
Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 21.70	9.22

Bulldozer

Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 23.28	9.22
Fremont	\$ 23.67	9.22
La Plata	\$ 23.57	8.72
Chipper	\$ 22.04	8.26

Crane

Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 25.01	8.22
La Plata	\$ 25.21	8.22
Drill	\$ 20.84	2.66
Forklift	\$ 18.30	5.01
Grade Checker	\$ 23.91	7.89

Grader/Blade

Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 16.39 **	4.20
Fremont	\$ 19.68	3.37
La Plata	\$ 19.83	4.20
Guardrail/Post Driver	\$ 16.07 **	4.41

Loader (Front End)

Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Gunnison, Hinsdale, Mineral, Montrose, Ouray, Rio Grande, Saguache, San Juan	\$ 23.38	8.22
Fremont	\$ 23.67	9.22
La Plata	\$ 23.36	7.09
Montezuma	\$ 22.82	8.72
San Miguel	\$ 23.82	9.22

Mechanic

Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Gunnison, Hinsdale, Mineral, Montezuma, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 16.74 **	4.20
Fremont	\$ 18.79	3.51

Oiler

Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan	\$ 22.97	7.88
Fremont	\$ 22.97	8.56
La Plata	\$ 24.08	5.49
San Miguel	\$ 22.97	9.22

Roller/Compactor (Dirt and Grade Compaction)

Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores,

Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 19.24	4.96
Fremont	\$ 16.52 **	5.28
La Plata	\$ 18.33	2.98
Rotomill	\$ 16.28 **	4.41
Scraper	\$ 17.62**	2.96
Screed		
Alamosa	\$ 20.33	6.81
Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 19.58	4.96
La Plata	\$ 17.86	2.75
Tractor	\$ 15.08 **	2.95

TRAFFIC SIGNALIZATION:

Groundsman	\$ 17.04 **	2.28
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TRUCK DRIVER

Distributor		
Alamosa	\$ 18.40	4.51
Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, La Plata, Mineral, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 17.62 **	5.27
Montezuma	\$ 15.80 **	5.27
Dump Truck		
Alamosa	\$ 14.15 **	3.83
Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Gunnison, Hinsdale, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 16.56 **	4.03
Fremont	\$ 16.55 **	4.34
La Plata	\$ 16.90 **	3.83
Mineral	\$ 16.97 **	4.61
Lowboy Truck	\$ 17.25 **	5.84
Mechanic	\$ 17.79	3.51
Multi-Purpose Specialty & Hoisting Truck	\$ 14.60 **	3.49
Pickup and Pilot Car		
Alamosa, Archuleta, Chaffee, Conejos, Custer, Delta, Dolores, Fremont, Gunnison, Hinsdale, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 14.04 **	3.49
La Plata	\$ 15.47 **	3.49
Semi truck		
Alamosa, Archuleta, Chaffee, Gunnison, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, San Miguel	\$ 19.42	5.41
Semi Truck		
Conejos, Custer, Delta, Dolores, Fremont, Hinsdale, La Plata	\$ 17.25 **	5.41

Water Truck		
Alamosa	\$ 17.58 **	3.75
Archuleta, Chafee, Conjeos, Custer, Delta, Dolores, Gunnision, Hinsdale, Mineral, Montrose, Ouray, Rio Grande, San Miguel, San Juan, Saguache	\$ 16.75 **	3.04
Fremont	\$ 16.15 **	3.14
La Plata	\$ 17.67 **	3.43
Montezuma	\$ 14.88 **	2.07

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information.

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 <https://www.dol.gov/agencies/whd/government-contracts>.

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)).

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 07/01/2024. 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. The date, 07/01/2024 in the example is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing this classification and rate.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the 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. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * a survey underlying a wage determination
- * an existing published wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail 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 an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail 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 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

END OF GENERAL DECISION



DIVISION V
FEDERAL GENERAL PROVISIONS

FREMONT COUNTY AIRPORT
1V6 AWOS Replacement
FAA AIP No: 3-08-0009-025-2025

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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:

Paragraph Number	Term	Definition
10-01	AASHTO	The American Association of State Highway and Transportation Officials.
10-02	Access Road	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
10-03	Advertisement	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
10-04	Airport	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.
10-05	Airport Improvement Program (AIP)	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
10-06	Air Operations Area (AOA)	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.
10-07	Apron	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
10-08	ASTM International (ASTM)	Formerly known as the American Society for Testing and Materials (ASTM).
10-09	Award	The Owner's notice to the successful bidder of the acceptance of the submitted bid.
10-10	Bidder	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized

Paragraph Number	Term	Definition
		representative, who submits a proposal for the work contemplated.
10-11	Building Area	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.
10-12	Calendar Day	Every day shown on the calendar.
10-13	Certificate of Analysis (COA)	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
10-14	Certificate of Compliance (COC)	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.
10-15	Change Order	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.
10-16	Contract	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.
10-17	Contract Item (Pay Item)	A specific unit of work for which a price is provided in the contract.
10-18	Contract Time	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.

Paragraph Number	Term	Definition
10-19	Contractor	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.
10-20	Contractors Quality Control (QC) Facilities	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
10-21	Contractor Quality Control Program (CQCP)	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.
10-22	Control Strip	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
10-23	Construction Safety and Phasing Plan (CSPP)	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.
10-24	Drainage System	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
10-25	Engineer	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.
10-26	Equipment	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.
10-27	Extra Work	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

Paragraph Number	Term	Definition
		Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.
10-28	FAA	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
10-29	Federal Specifications	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
10-30	Force Account	<p>a. Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</p> <p>b. Owner Force Account - Work performed for the project by the Owner's employees.</p>
10-31	Intention of Terms	<p>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.</p> <p>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.</p>
10-32	Lighting	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

Paragraph Number	Term	Definition
		or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
10-33	Major and Minor Contract Items	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.
10-34	Materials	Any substance specified for use in the construction of the contract work.
10-35	Modification of Standards (MOS)	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
10-36	Notice to Proceed (NTP)	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.
10-37	Owner	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 Fremont County.
10-38	Passenger Facility Charge (PFC)	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.
10-39	Pavement Structure	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
10-40	Payment bond	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.
10-41	Performance bond	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.
10-42	Plans	The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done

Paragraph Number	Term	Definition
		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.'
10-43	Project	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.
10-44	Proposal	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.
10-45	Proposal guaranty	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.
10-46	Quality Assurance (QA)	Owner's responsibility to assure that construction work completed complies with specifications for payment.
10-47	Quality Control (QC)	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
10-48	Quality Assurance (QA) Inspector	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.
10-49	Quality Assurance (QA) Laboratory	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.
10-50	Resident Project Representative (RPR)	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.

Paragraph Number	Term	Definition
10-51	Runway	The area on the airport prepared for the landing and takeoff of aircraft.
10-52	Runway Safety Area (RSA)	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the <i>Construction Safety and Phasing Plan (CSPP)</i> for limits of the RSA.
10-53	Safety Plan Compliance Document (SPCD)	Details how the Contractor will comply with the CSPP.
10-54	Specifications	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.
10-55	Sponsor	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.
10-56	Structures	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.
10-57	Subgrade	The soil that forms the pavement foundation.
10-58	Superintendent	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.
10-59	Supplemental Agreement	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

Paragraph Number	Term	Definition
		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.
10-60	Surety	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.
10-61	Taxilane	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
10-62	Taxiway	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.
10-63	Taxiway/Taxilane Safety Area (TSA)	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the <i>Construction Safety and Phasing Plan (CSPP)</i> for limits of the TSA.
10-64	Work	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.
10-65	Working day	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.
10-66	Owner Defined terms	None

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders).

The *Advertisement for Bids* was published on the *Rocky Mountain E-Purchasing System* (www.bidnetdirect.com/colorado) and the Fremont County website (www.fremontcountyco.gov) on April 16, 2025.

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 **8 percent** of the total project cost.

A pre-bid 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.

A non-mandatory **Pre-bid CONFERENCE CALL** will be held on **Wednesday, April 23rd, 2025**, at 10:00 A.M. (MST) at the following call-in information:

Microsoft Teams Meeting (Virtual Access)

Web Address: <https://www.microsoft.com/en-us/microsoft-teams/join-a-meeting>

Meeting ID: **272 754 730 909**

Passcode: **YQ6sg3Vy**

Call-In (Audio Only)

Toll number: **(480) 378-0989**

Conference ID: **127 572 787#**

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.

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 submitted electronically via the Fremont County Bid Request Portal ([Bid Request Portal | Fremont County, Colorado](#)). 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 not be considered.

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 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 will not be opened publicly but will be opened at the time specified in the advertisement. Bid results will be uploaded to and made available from the Rocky Mountain E-Purchasing System (www.bidnetdirect.com/colorado). Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall not be considered.

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 **9 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



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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 **One Hundred Twenty (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 responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

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. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

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

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.

Special Provisions are listed in Division II of the Contract Documents.

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): CAD Files and Excel PNEZD.

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



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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

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: reference the plans for the removal of existing facilities and/or utilities (as applicable).

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 by others 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 located in Appendix A of 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.

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.

Refer to Contract Documents for Insurance Requirements.

END OF SECTION 70



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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 **50 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 **7 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 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 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 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 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.

Schedule	Liquidated Damages Cost	Allowed Construction Time
Phase 1	\$500/day	30 Calendar Days
Phase 2	\$500/day	5 Calendar Days
Final Completion	\$500/day	7 Calendar Days

The maximum construction time allowed for Phases 1 - 3 will be the sum of the time allowed for individual sequential phases, but not more than 35 Calendar Days to reach Substantial Completion. 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.

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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 may be weighed, and such weights will be converted to cubic yards 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

Term	Description
Excavation and Embankment Volume	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
Measurement and Proportion by Weight	The term “ton” will mean the short ton consisting of 2,000 pounds 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

Term	Description
	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 empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark.
Measurement by Volume	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 capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
Asphalt Material	Asphalt materials will be measured by the gallon or ton. When measured by volume, such volumes will be measured at 60°F 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.
Cement	Cement will be measured by the ton or hundredweight.
Structure	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
Timber	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.
Plates and Sheets	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.
Miscellaneous Items	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.

Term	Description
Scales	<p>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. The use of spring balances will not be permitted.</p> <p>In the event inspection reveals the scales have been “overweighing” (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%.</p> <p>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. Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.</p> <p>Scale installations shall have available ten standard 50-pound weights for testing the weighing equipment or suitable weights and devices for other approved equipment.</p> <p>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.</p>
Rental Equipment	<p>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 <i>Payment for Extra Work</i>.</p>
Pay Quantities	<p>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</p>

Term	Description
	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.

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 hereinbefore 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, **10 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 50-14. 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 previous payments and deductions, will then be certified for payment to the Contractor.

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).
- k.** Security for Construction Warranty.
- l.** Equipment commissioning documentation submitted, if required.

END OF SECTION 90



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DIVISION VI

FEDERAL TECHNICAL SPECIFICATIONS

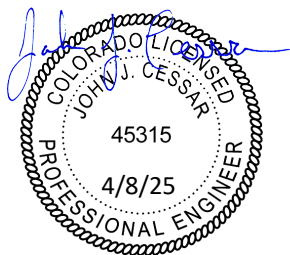
FREMONT COUNTY AIRPORT

1V6 AWOS Replacement

FAA AIP No: 3-08-0009-025-2025

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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 **Eight (8) 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. 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:

- a. With first pay request, 90%.
- b. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, Contractor Final Project Documentation, the final 10%.

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

EEOC-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 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 and grubbed 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 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 in diameter shall be grubbed out to a depth of at least 18 inches 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 land specifically cleared, cleared and grubbed, or of tree removal shall not be measured separately, but shall be considered incidental to the project.

BASIS OF PAYMENT

151-4.1 No separate payment shall be made for clearing, clearing and grubbing, or tree removal. Any costs shall be considered incidental to the project

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.

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.

a. Blasting. Blasting shall not be allowed.

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 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 off 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 unclassified 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 are not required.

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 6 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 D698. 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 $\pm 2\%$ 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 ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Two density tests will be taken by the Contractor for every lift of the embankment which is required to be compacted, or other appropriate frequencies as determined by the RPR.

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 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. Under all areas to be paved, the embankments shall be compacted to a depth of 6-inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698. 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 D1556 or 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.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

152-2.9 Proof rolling. Not required.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 6 inches and to a density of not less than 100 percent of the maximum dry density as determined by ASTM D698. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 6 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698.

The material to be compacted shall be within $\pm 2\%$ 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 $\frac{3}{4}$ inch sieve, follow the methods in ASTM D698. Two tests for moisture content and compaction will be taken at each subgrade lift. All quality assurance testing shall be done by the Contractor.

The in-place field density shall be determined in accordance with ASTM D1556 or 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.

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 $\pm 1/2$ 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

There is no separate measurement for Item P-152 Excavation, Subgrade, and Embankment but shall be considered incidental to the project.

BASIS OF PAYMENT

152-4.1 There will be no separate payment for Item P-152 Excavation, Subgrade, and Embankment but shall be considered incidental to the project.

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 10-lb Rammer and a 18-in. Drop

ASTM International (ASTM)

ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³)

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)

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

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66 Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152



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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, Type II, or V; **C595**, Type IL.

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.

Sieve Size	Percent Passing by weight
3/4 inch	100
No. 200	0 - 12

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)

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C150	Standard Specification for Portland Cement
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C595	Standard Specification for Blended Hydraulic Cements
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-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

Maximum Aggregate Size	ASTM C33, Table 3 Grading Requirements (Size No.)
1 1/2 inch	467 or 4 and 67
1 inch	57
3/4 inch	67
1/2 inch	7

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking. Not used.

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, II, or V: C595 Type IL.

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 reinforcing steel, welded steel wire fabric, or welded deformed steel fabric conforming to the requirements of ASTM A615, ASTM A706, ASTM A775, ASTM A934, ASTM A1064, or ASTM A884.

610-2.11 Materials for curing concrete. Curing materials shall conform to white-pigmented liquid membrane-forming compound, Type 2, Class B conforming to ASTM C309.

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 minimum compressive strength of **4,000 psi in 28 days** as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The compressive strength stated herein may be modified for a higher compressive strength if required by manufacturer requirements for the equipment for which the material is being used for, (i.e. AWOS structure foundations).

The concrete shall contain not less than 470 pounds of cementitious material per cubic yard. 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 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 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 nor more than 100°F. 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. 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, 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, 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 Concrete shall be considered incidental to the associated items of construction and no separate measurement shall be made.

BASIS OF PAYMENT

610-6.1 Concrete shall be considered incidental to the associated items of construction and no separate payment shall be made.

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 C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
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 C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
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

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Item F-162 Chain-Link Fence

DESCRIPTION

162-1.1 This item shall consist of furnishing and erecting a chain-link fence in accordance with these specifications, the details shown on the plans, and in conformity with the lines and grades shown on the plans or established by the RPR.

MATERIALS

162-2.1 Fabric. The fabric shall be woven with a 9-gauge galvanized steel wire in a 2-inch mesh and shall meet the requirements of ASTM A392, Class 2.

162-2.2 Barbed wire. Barbed wire shall be 3-strand 12-1/2 gauge zinc-coated wire with 4-point barbs and shall conform to the requirements of ASTM A121, Class 3, Chain Link Fence Grade.

162-2.3 Posts, rails, and braces. Line posts, rails, and braces shall conform to the requirements of ASTM F1043 or ASTM F1083 as follows:

- Galvanized tubular steel pipe shall conform to the requirements of Group IA, (Schedule 40) coatings conforming to Type A, or Group IC (High Strength Pipe), External coating Type B, and internal coating Type B or D.
- Aluminum Pipe shall conform to the requirements of Group IB.

162-2.4 Gates. Gate frames shall consist of galvanized steel pipe or aluminum alloy pipe posts and shall conform to the specifications for the same material under paragraph 162-2.3. The fabric shall be of the same type material as used in the fence.

162-2.5 Wire ties and tension wires. Wire ties for use in conjunction with a given type of fabric shall be of the same material and coating weight identified with the fabric type. Tension wire shall be 7-gauge marcelled steel wire with the same coating as the fabric type and shall conform to ASTM A824.

All material shall conform to Federal Specification RR-F-191/4.

162-2.6 Miscellaneous fittings and hardware. Miscellaneous steel fittings and hardware for use with zinc-coated steel fabric shall be of commercial grade steel or better quality, wrought or cast as appropriate to the article, and sufficient in strength to provide a balanced design when used in conjunction with fabric posts, and wires of the quality specified herein. All steel fittings and hardware shall be protected with a zinc coating applied in conformance with ASTM A153. Barbed wire support arms shall withstand a load of 250 pounds applied vertically to the outermost end of the arm.

162-2.7 Concrete. Concrete shall have a minimum 28-day compressive strength of 3000 psi.

162-2.8 Marking. Each roll of fabric shall carry a tag showing the kind of base metal (steel, aluminum, or aluminum alloy number), kind of coating, the gauge of the wire, the length of fencing in the roll, and the name of the manufacturer. Posts, wire, and other fittings shall be identified as to manufacturer, kind of base metal (steel, aluminum, or aluminum alloy number), and kind of coating.

CONSTRUCTION METHODS

162-3.1 General. The fence shall be constructed in accordance with the details on the plans and as specified here using new materials. All work shall be performed in a workmanlike manner satisfactory to the RPR. The RPR shall establish and mark the property line or fence line for the work. The Contractor shall span the opening below the fence with barbed wire at all locations where it is not practical to conform the fence to the general contour of the ground surface because of natural or manmade features such as drainage ditches. The new fence shall be permanently tied to the terminals of existing fences as shown on the plans. The Contractor shall stake down the woven wire fence at several points between posts as shown on the plans.

The Contractor shall arrange the work so that construction of the new fence will immediately follow the removal of existing fences. The length of unfenced section at any time shall not exceed 300 feet. The work shall progress in this manner and at the close of the working day the newly constructed fence shall be tied to the existing fence.

162-3.2 Clearing fence line. Clearing shall consist of the removal of all stumps, brush, rocks, trees, or other obstructions that will interfere with proper construction of the fence. Stumps within the cleared area of the fence shall be grubbed or excavated. The bottom of the fence shall be placed a uniform distance above ground, as specified in the plans. When shown on the plans or as directed by the RPR, the existing fences which interfere with the new fence location shall be removed by the Contractor as a part of the construction work unless such removal is listed as a separate item in the bid schedule. All holes remaining after post and stump removal shall be refilled with suitable soil, gravel, or other suitable material and compacted with tampers.

The cost of removing and disposing of the material shall not constitute a pay item and shall be considered incidental to fence construction.

162-3.3 Installing posts. All posts shall be set in concrete at the required dimension and depth and at the spacing shown on the plans. Each post shall be no more than 10 feet apart with 36-inch minimum depths of concrete footings and 3-inches minimum cover for embedded posts.

The concrete shall be thoroughly compacted around the posts by tamping or vibrating and shall have a smooth finish slightly higher than the ground and sloped to drain away from the posts. All posts shall be set plumb and to the required grade and alignment. No materials shall be installed on the posts, nor shall the posts be disturbed in any manner within seven (7) days after the individual post footing is completed.

Should rock be encountered at a depth less than the planned footing depth, a hole 2 inches larger than the greatest dimension of the posts shall be drilled to a depth of 12 inches. After the posts are set, the remainder of the drilled hole shall be filled with grout, composed of one part Portland cement and two parts mortar sand. Any remaining space above the rock shall be filled with concrete in the manner described above.

In lieu of drilling, the rock may be excavated to the required footing depth. No extra compensation shall be made for rock excavation.

162-3.4 Installing top rails. The top rail shall be continuous and shall pass through the post tops. The coupling used to join the top rail lengths shall allow for expansion.

162-3.5 Installing braces. Horizontal brace rails, with diagonal truss rods and turnbuckles, shall be installed at all terminal posts.

162-3.6 Installing fabric. The wire fabric shall be firmly attached to the posts and braced as shown on the plans. All wire shall be stretched taut and shall be installed to the required elevations. The fence shall generally follow the contour of the ground, with the bottom of the fence fabric no less than one inch or more than 4 inches from the ground surface. Grading shall be performed where necessary to provide a neat appearance.

At locations of small natural swales or drainage ditches and where it is not practical to have the fence conform to the general contour of the ground surface, longer posts may be used and multiple strands of barbed wire stretched to span the opening below the fence. The vertical clearance between strands of barbed wire shall be 6 inches or less. Tension wire shall be used at the fence base.

162-3.7 Electrical grounds. Electrical grounds shall be constructed at 500 feet intervals. The ground shall be accomplished with a copper clad rod 8 feet long and a minimum of 5/8 inches in diameter driven vertically until the top is 6 inches below the ground surface. A No. 6 solid copper conductor shall be clamped to the rod and to the fence in such a manner that each element of the fence is grounded. Installation of ground rods shall not constitute a pay item and shall be considered incidental to fence construction. The Contractor shall comply with FAA-STD-019, Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment, paragraph 4.2.3.8, Lightning Protection for Fences and Gates, when fencing is adjacent to FAA facilities.

162-3.8 Cleaning up. The Contractor shall remove from the vicinity of the completed work all tools, buildings, equipment, etc., used during construction. All disturbed areas shall be seeded per T-901.

METHOD OF MEASUREMENT

162-4.1 The quantities of chain-link fence shall not be measured separately, but shall be considered incidental to the project.

BASIS OF PAYMENT

162-5.1 No separate payment shall be made for chain-link fence. Any costs shall be considered incidental to the project.

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 A121	Standard Specification for Metallic-Coated Carbon Steel Barbed Wire
ASTM A153	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A392	Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric

ASTM A491	Standard Specification for Aluminum-Coated Steel Chain-Link Fence Fabric
ASTM A824	Standard Specification for Metallic-Coated Steel Marcellled Tension Wire for Use with Chain Link Fence
ASTM B117	Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM F668	Standard Specification for Polyvinyl Chloride (PVC), Polyolefin and other Organic Polymer Coated Steel Chain-Link Fence Fabric
ASTM F1043	Standard Specification for Strength and Protective Coatings on Steel Industrial Fence Framework
ASTM F1083	Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
ASTM F1183	Standard Specification for Aluminum Alloy Chain Link Fence Fabric
ASTM F1345	Standard Specification for Zinc 5% Aluminum-Mischmetal Alloy Coated Steel Chain-Link Fence Fabric
ASTM G152	Standard Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G153	Standard Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials
ASTM G155	Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials
Federal Specifications (FED SPEC)	
FED SPEC RR-F-191/3	Fencing, Wire and Post, Metal (Chain-Link Fence Posts, Top Rails and Braces)
FED SPEC RR-F-191/4	Fencing, Wire and Post, Metal (Chain-Link Fence Accessories)
FAA Standard	
FAA-STD-019	Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment
FAA Orders	
5300.38	AIP Handbook

END OF ITEM F-162

Item T-901 Seeding

DESCRIPTION

901-1.1 This item shall consist of soil preparation and seeding the areas shown on the plans or as directed by the RPR in accordance with these specifications.

MATERIALS

901-2.1 Seed. The species and application rates of grass, legume, and cover-crop seed furnished shall be those stipulated herein. Seed shall conform to the requirements of Federal Specification JJJ-S-181, Federal Specification, Seeds, Agricultural.

Seed shall be furnished separately or in mixtures in standard containers labeled in conformance with the Agricultural Marketing Service (AMS) Seed Act and applicable state seed laws with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the RPR duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within six (6) months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed. Wet, moldy, or otherwise damaged seed will be rejected.

Seeds shall be applied as follows:

Seed Properties and Rate of Application

Seed	Minimum Seed Purity (Percent)	Minimum Germination (Percent)	Rate of Application lb/acre
Crested Wheatgrass, Ephraim	90	95	2.50
Western Wheatgrass, Arriba	90	95	6.50
Smooth Brome, Lincoln	90	95	4.00
Alkali Sacaton	90	95	0.50
Viva Galleta Grass	90	95	2.50
Orchard Grass, Paiute	90	95	1.00
Perennial Ryegrass, Tetraploid	90	95	2.50
Intermediate Wheatgrass, Rush	90	95	6.00

Seeding shall be performed during the period between as recommended by the supplier, unless otherwise approved by the RPR.

901-2.2 Lime. Not required.

901-2.3 Fertilizer. Fertilizer shall be standard commercial fertilizers supplied separately or in mixtures containing the percentages of total nitrogen, available phosphoric acid, and water-soluble potash. They

shall be applied at the rate and to the depth specified, and shall meet the requirements of applicable state laws. They shall be furnished in standard containers with name, weight, and guaranteed analysis of contents clearly marked thereon. No cyanamide compounds or hydrated lime shall be permitted in mixed fertilizers.

The fertilizers may be supplied in one of the following forms:

- a. A dry, free-flowing fertilizer suitable for application by a common fertilizer spreader;
- b. A finely-ground fertilizer soluble in water, suitable for application by power sprayers; or
- c. A granular or pellet form suitable for application by blower equipment.

Fertilizers shall be 4-6-2 commercial fertilizer and shall be spread at the rate of 250 pounds.

901-2.4 Soil for repairs. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be relatively free from large stones, roots, stumps, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the RPR before being placed.

CONSTRUCTION METHODS

901-3.1 Advance preparation and cleanup. After grading of areas has been completed and before applying fertilizer and ground limestone, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches in any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches as a result of grading operations and, if immediately prior to seeding, the top 3 inches of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

When the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches. Clods shall be broken and the top 3 inches of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

901-3.2 Dry application method.

a. Liming. Not required.

b. Fertilizing. Following advance preparations and cleanup fertilizer shall be uniformly spread at the rate that will provide not less than the minimum quantity stated in paragraph 901-2.3.

c. Seeding. Grass seed shall be sown at the rate specified in paragraph 901-2.1 immediately after fertilizing. The fertilizer and seed shall be raked within the depth range stated in the special provisions. Seeds of legumes, either alone or in mixtures, shall be inoculated before mixing or sowing, in accordance with the instructions of the manufacturer of the inoculant. When seeding is required at other than the seasons shown on the plans or in the special provisions, a cover crop shall be sown by the same methods required for grass and legume seeding.

d. Rolling. After the seed has been properly covered, the seedbed shall be immediately compacted by means of an approved lawn roller, weighing 40 to 65 pounds per foot of width for clay soil (or any soil having a tendency to pack), and weighing 150 to 200 pounds per foot of width for sandy or light soils.



901-3.3 Maintenance of seeded areas. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the RPR. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

When either the dry or wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the RPR. A grass stand shall be considered adequate when bare spots are one square foot (0.01 sq m) or less, randomly dispersed, and do not exceed 3% of the area seeded.

METHOD OF MEASUREMENT

901-4.1 The quantity of seeding and hydromulching to be paid for shall be the number of acres or fractions thereof measured on the ground surface, completed and accepted. There is no separate measurement for hydromulching but shall be considered incidental to seeding and meet the requirements in the Mulching (T-908) specification.

901-4.2 Measurement for application and placement of Landscape Stone (Median Cover Material) with Herbicide shall be by the square foot for the locations and dimensions shown in the plans. There will be no additional measurement for material placed beyond the dimensions and locations in the plans.

BASIS OF PAYMENT

901-5.1 Payment shall be made at the contract unit price per acre or fraction thereof, which price and payment shall be full compensation for furnishing and placing all material and for all labor, equipment, tools, and incidentals necessary to complete the work prescribed in this item.

901-5.2 Payment shall be made at the contract unit price per square foot, which price and payment shall include full compensation for furnishing all hauling, labor, tools, equipment, and incidentals necessary to the complete the item in-place.

Payment will be made under:

Item 901-5.1	Seeding with Hydromulch - per Acre
Item 901-5.2	Landscape Rock with Herbicide (Det. 1, Sht. C1.1) - 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 C602	Standard Specification for Agricultural Liming Materials
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Federal Specifications (FED SPEC)

FED SPEC	JJJ-S-181, Federal Specification, Seeds, Agricultural
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Advisory Circulars (AC)

AC 150/5200-33	Hazardous Wildlife Attractants on or Near Airports
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FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-901

Item T-908 Mulching

DESCRIPTION

908-1.1 This item shall consist of furnishing, hauling, placing, and securing mulch on surfaces indicated on the plans or designated by the RPR.

MATERIALS

908-2.1 Mulch material. Acceptable mulch shall be the materials listed below or any approved locally available material that is similar to those specified. Mulch shall be free from noxious weeds, mold, and other deleterious materials. Mulch materials, which contain matured seed of species that would volunteer and be detrimental to the proposed overseeding, or to surrounding farm land, will not be acceptable. Straw or other mulch material which is fresh and/or excessively brittle, or which is in such an advanced stage of decomposition as to smother or retard the planted grass, will not be acceptable. Mulching material and tackifier shall be constructed in accordance with CDOT 2023 Standard Specifications, Division 200, Sections 209 and 213, as shown below.

a. Wood Cellulose Fiber Mulch. Wood cellulose fiber mulch shall consist of virgin wood fibers manufactured expressly from clean whole wood chips. The chips shall be processed in such a manner as to contain no growth or germination inhibiting factors. Fiber shall not be produced from recycled materials such as sawdust, paper, cardboard, or residue from pulp and paper plants. The wood cellulose fibers of the mulch must maintain uniform suspension in water under agitation. Upon application, the mulch material shall form a blotter like mat covering the ground. This mat shall have the characteristics of moisture absorption and percolation and shall cover and hold seed in contact with the soil. The Contractor shall obtain certifications from suppliers that laboratory and field testing of their product has been accomplished, and that it meets all of the foregoing requirements pertaining to wood cellulose fiber mulch. The wood cellulose fiber mulch shall conform to the following requirements:

Wood Cellulose Fiber Mulch Requirements

Property	Requirement
Percent moisture content	10.0% ± 3.0%
Percent Organic Matter* (Wood Cellulose Fiber)	99.3% ± 0.2%
Percent Ash Content*	0.7% ± 0.2%
pH	4.9 ± 0.5
Water Holding Capacity*	1200-1600 grams**

*Oven Dried Basis

**Per 100 grams of fiber

The wood cellulose fiber mulch shall be packaged in units containing current labels, with the manufacturer's name, the net weight, and certification that the material meets the foregoing requirements for wood cellulose fiber mulch.

b. Mulch Tackifier. Material for mulch tackifier shall consist of a free-flowing, noncorrosive powder produced either from the natural plant gum of *Plantago Insularis* (Desert Indianwheat) or pre-gelatinized 100 percent natural corn starch polymer. The powders shall possess the following properties:

Properties of *Plantago Insularis* (Desert Indianwheat)

Property	Requirement
pH 1% solution	6.5 - 8.0

Properties of Pre-Gelatinized 100 Percent Natural Corn Starch Polymer

Property	Requirement
Organic Nitrogen as Protein	5.5% - 7%
Ash Content	0-2%
Fiber	4-5%
pH 1% solution	6.5 – 8.0
Size	100% thru 850 microns (20 mesh)
Settleable solids	<2%

All fibers shall be colored green or yellow with a biodegradable dye. The material used for mulch tackifier shall not contain any mineral filler, recycled cellulose fiber, clays, or other substances that may inhibit germination or growth of plants.

Water applied for moisture and density control, as dust palliative, and for prewetting shall be free from injurious matter. Water for landscaping shall be free from oil, acids, alkalis, salts, or any substance injurious to plant life.

When the water source proposed for use by the Contractor is not of known quality and chemical content, submit samples of the water for approval before use.

Magnesium chloride dust palliative shall consist of a magnesium chloride base agent, water, and other enhancing or nondetrimental ions. The chemical analysis shall conform to the following:

Magnesium Chloride Dust Palliative Chemical Constituents Percent by Weight

Property	Requirement
Magnesium Chloride (MgCl ₂)	28 to 35
Enhancing or Non-detrimental Ions	0 to 5
Water	65 to 72

CONSTRUCTION METHODS

908-3.1 Hydraulic Mulching. Wood cellulose fiber mulch and mulch tackifier shall be added to water to form a homogeneous slurry. The operator shall spray apply the slurry mixture uniformly over the designated seeded area. Hydraulic mulching shall not be done in the presence of free surface water. Mixing procedure for the hydraulic mulch and tackifier mixture shall be as follows:

1. Fill tank with water approximately 1/4 full.
2. Continue filling while agitating with engine at full rpm.
3. Pour tackifier, at a moderate rate, directly into area of greatest turbulence.
4. With the recommended amount of tackifier in solution, add wood cellulose fiber mulch. Do not add fertilizer. Apply the hydromulch and tackifier mixture at the following rate:

Wood Cellulose Fiber	Mulch Tackifier
2,000 lb/acre	100 lb/acre

908-3.2 Mulch Tackifier. Mixing procedure for mulch tackifier shall be as follows:

1. Fill tank with desired amount of water and run engine at full R.P.M.
2. Add wood cellulose fiber. Agitate until a homogenous, non-lumpy slurry is formed. Do not add fertilizer.
3. Slowly sift powdered tackifier into slurry and continue to agitate for at least five minutes.

Mulch tackifier shall be sprayed over hay or straw using a nozzle that will disperse the spray into a mist that will uniformly cover the mulch.

Application Rate: Apply this as an overspray at the following rate or as approved by the Engineer.

Mulch Tackifier Powder	Wood Cellulose	Fiber Water
200 lb/acre	300 lb/acre	2,000 gal acre

908-3.3 General. Mulch shall be tacked simultaneously or immediately upon completion of mulching and crimping to avoid nonuniform coverage. Areas not properly mulched, or areas damaged due to the Contractor's negligence, shall be repaired and remulched as described above, at the Contractor's expense.

Mulch removed by circumstances beyond the Contractor's control shall be repaired and remulched as ordered. Payment for this ordered corrective work shall be at the contract prices.

The Engineer may order test sections be established for adjusting the mulching equipment to assure conformance with the specified application rate. The Engineer may order equipment readjustment at any time.



METHOD OF MEASUREMENT

908-4.1 Measurement for Mulching shall be considered incidental to the Seeding (T-901) specification.

BASIS OF PAYMENT

908-5.1 Payment for Mulching shall be considered incidental to the Seeding (T-901) bid line 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 D977 Standard Specification for Emulsified Asphalt

Advisory Circulars (AC)

AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-908



ELECTRICAL TECHNICAL SPECIFICATIONS

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Item L-100 Electrical General Requirements

100-1.1 General. This Item includes furnishing and installing all material, equipment and apparatus, and all labor, tools, services, and equipment required for the removal of portions of the airfield lighting system as shown on the drawings and as follows:

- a. The demolition, removal and/or salvage of portions of the existing airfield lighting systems including conduit, cable, and retroreflective markers (**Not Required**).
- b. The removal of existing airfield lighting cable and conduit for replacement and reconnection to existing circuits.
- c. Temporary Airfield lighting power systems to maintain operation of airfield lighting circuits. (**Not Required**).

Installation shall be in accordance with L-Series specification Items or as noted on the plans. Perform all work not included in the FAA Specifications in accordance with the National Electrical Code, applicable local and Airport standards and regulations.

100-1.2 Demolition and Salvage.

a. Removal and salvage of airfield electrical elements is included under this Item shall include the intent, but not limited to the specific elements, of the following:

(1) Remove existing retroreflective markers, return to Airport or disposal. – **Not Required**.

b. Any fixtures damaged that are to remain in-place or identified as remove and salvage to Airport on the plans, shall be replaced at Contractor's expense. (**Not Required**).

c. Demolition (removal and non-return to Owner or for re-installation) of other airfield electrical system elements shall include the intent, but not limited to the specific elements, of the following:

(1) Power Cables; direct buried or in conduit.

(2) Conduits, fittings and concrete duct or cable markers.

d. Demolition (removal and non-return) of other elements associated with the airfield electrical system may also be included under other Items of this project. Elements covered within this specification shall include the intent, but not be limited to the specific elements, of the following:

(1) Underground conduits and duct banks, both concrete encased and direct earth buried.

(2) Grading and backfill associated with removal of the foregoing elements shall be covered under P-152, "Excavation and Embankment".

100-1.3 New Construction Grading and Backfill. Grading and backfill associated with the removal of existing items or construction of the new ducts and conduits shall be installed in accordance with P-152, "Excavation and Embankment" P-153, "Controlled Low-Strength Material (CLSM)" and P-610 "Concrete", there will be no separate measurement or payment for any backfill, compaction, restoration or materials for slurry or concrete encased conduits and duct banks but shall be considered incidental to the associated item being installed.

100-1.4 Related Documents. The General Provisions of the Contract, including General and Special Conditions, apply to work specified in this item.



- a. Conflicts between Drawing and Specifications (Contract Documents) and between Contract Documents and references within the Contract Documents: Drawings and specifications are complementary. Work called for by one is binding as if called for by both. Prospective Contractors shall, as part of their proposals, enumerate, identify, and list conflicts they find to exist within the Contract Documents, and between these Documents and the rules, regulations, standards, and codes of the authority having jurisdiction (Airport Authority, City, County) local Utility companies and local County or State governing bodies. No Allowance shall subsequently be made to the Contractor by reason of his/her failure to have brought said discrepancies to the attention of the Consultant during the bidding period or by reason of any error on the Contractor's part.
- b. Execution of Contract is evidence that Contractor has examined all existing conditions, drawings and specifications related to work, and is informed to extent and character of work. Claims made during construction for labor and materials required due to difficulties encountered as a result of Contractor's inattention to this issue, which could have been clarified prior to bid had examination been made, will be denied.

100-1.5 Temporary Lighting and Circuits.

- a. Contractor shall coordinate with Airport Maintenance or Operations before the end of each work shift to verify that all airfield lighting circuits are operational. Contractor shall provide all labor and material for work to troubleshoot and repair inoperable circuits related to construction activity, non-pay item (NPI).
- b. Contractor shall provide and maintain on site, sufficient equipment as required to provide temporary lighting and circuit extensions.
- c. Work associated with taxiway shall be performed during coordinated taxiway closures in segments, reconnected to remaining existing circuit segments, and tested for operation prior to the end of each shift before re-opening taxiway if required to prevent the need for excessive temporary cabling.

100-1.6 Specifications and Standards. As a supplement to the installation requirements of this item, the following standard specifications, and regulations of the issues in effect on the date of this solicitation are incorporated herein by reference and are made a part hereof for electrical work and installation and splicing of underground cables.

NEC National Electrical Code

Lightning Protection, Grounding, Bonding and Shielding Requirements for Facilities

Installation and Splicing of Underground Cables

Local Governing Bodies' Public Works Department

American Association of State Highway and Transportation Officials (AASHTO)

- (1) AASHTO LTS-5 (2009: Errata 2009: Amendment 2010) Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals.

ASTM International (ASTM)

- (1) ASTM A123/A123M (2009) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- (2) ASTM A153/A153M (2009) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- (3) ASTM A575 (1996; R 2007) Standard Specification for Steel Bars, Carbon, Merchant Quality, M-Grades
- (4) ASTM A576 (1900b; R 2006) Standard Specification for Steel Bars, Carbon, Hot-Wrought, Special Quality

Illuminating Engineering Society of North America (IESNA)

- (1) IESNA HB-9 (2000: Errata 2004: Errata 2005: Errata 2006) IES Lighting Handbook. Institute of Electrical and Electronics Engineers (IEEE)



- (1) IEEE 81 (1983) Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System.
 - (2) IEEE C135.1 (1999) Standard for Zinc-Coated Steel Bolts and Nuts for Overhead Line Construction.
 - (3) IEEE C2 (2007; Errata 06-1; TIA 07-1: TIA 07-3, Errata 07-2; TIA 08-4; TIA 08-6; TIA 08-7; TIA 08-8; TIA 08-9; TIA 08-10; TIA 08-11; TIA 09-12; TIA 09-13; TIA 09-14; Errata 09-3; TIA 09-15; TIA 09-16; TIA 10-17) National Electrical Safety Code
 - (4) IEEE Std Dictionary (2009) IEEE Standards Dictionary: Glossary of Terms & Definitions National Electrical Manufacturers Association (NEMA)
 - (1) ANSI C136.3 (2005; R 2009) American National Standard for Roadway and Area Lighting Equipment Luminaire Attachments National Fire Protection Association (NFPA)
 - (1) NFPA 70 (2011; TIA 11-1; Errata 2011) National Electrical Code
- ASHRAE/IESNA 90.1, 2004
American Welding Society (AWS)
Factory Mutual Institute Association (FM)
Lightning Protection Institute
International Electrical Testing Association
Underwriters Laboratories (UL)
- (1) UL 467(2007) Grounding and Bonding Equipment

When required by law or regulations, the government agency having jurisdiction for inspections shall be given reasonable notice and opportunity to inspect the work. Any work that is enclosed or covered up before such inspection and test shall be uncovered at the Contractor's expense: after it has been inspected, the Contractor shall restore the work to its original condition at his own expense.

100-1.7 Shop Drawings and Material Lists. Prior to the installation of any material and equipment and no later than 30 days after notice to proceed, the Contractor shall submit to the Owner for approval electronic PDF copies of manufacturers' brochures containing complete dimensional and performance characteristics, wiring diagrams, installation, and operation instructions, etc., for the equipment listed in the individual L-Series specification Items. Each submittal shall be titled and include the corresponding specification section(s).

A materials list shall be submitted listing each specification paragraph number and stating whether the materials proposed are as specified or are substitutions. If the item is a substitute item, a complete submittal as described in the above paragraph shall be provided for that item.

Submittal data shall be presented in a clear, precise, and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as a good quality as the original. Clearly and boldly 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 boldly and clearly made with arrows or circles (highlighting is not acceptable). Contractor is solely responsible for delays in project accruing directly or indirectly from late submissions or resubmissions of submittals.

The data submitted shall be sufficient, in the opinion of the Engineer, to determine compliance with the plans and specifications. The Contractor's submittals shall be labeled and titled by specification section. The Engineer reserves the right to reject any and all equipment, materials, or procedures, which, in the Engineer's opinion, does not meet the system design and the standards and codes, specified herein.



EQUIPMENT AND MATERIALS

100-2.1 Equipment. Conduits, conduit fittings, conductors, connectors, boxes, and wiring devices shall meet requirements of Item L-110.

100-2.2 Conduit, Underground. Conduits run underground are specified in Item L-110 of these specifications. Existing conduit will remain for reuse and installation of new cables as indicated in plans.

100-2.3 Conduit Fittings. Not used.

100-2.4 Concrete-Encased Duct. Concrete-encased PVC duct shall be as specified in Item L-110.

100-2.5 Concrete Duct Markers. Markers shall be as specified in Item L-110 and as detailed on drawings.

100-2.6 Concrete Handholes. Handholes shall be as specified in Item L-115 and as detailed on drawings.

100-2.7 Light Bases and Transformer Housing. (Not Required). New light bases, transformer housings, junction cans and covers shall be as specified in AC 150/5345-42, Item L-125 and as detailed on drawings.

CONSTRUCTION METHODS

100-3.1 Existing Utilities. Prior to any excavation or trenching, Contractor shall provide utility locator or contact Blue Stake to locate any existing cables and utilities, which will be crossed by the trench. Where existing underground utilities are shown on plans to conflict with existing conduit removal and / or new conduit installation, Contractor shall pothole to verify the location and depth. Ensure these utilities are permanently disconnected if they are going to be demolished. The existing service lines shall be exposed by hand digging in those areas that will be crossed and shall be protected from any possible damage. If any damage occurs, it shall be the Contractor's responsibility to immediately repair such damage with materials and methods approved by the Owner and in compliance with applicable codes and standards, at Contractor's expense. Existing utilities to be abandoned shall be removed at the point of crossing as shown on the drawings.

100-3.2 Demolition. Airfield Lighting and Signage. **(Not Required).**

a. Removal of existing conductors associated with taxiway(s) that are required to remain active during daytime operations (or as required by Airport) shall be performed in segments during each shift or construction phase, immediately followed by installation of new cable or temporary airfield circuit jumpers, reconnection and testing prior to end of shift to maintain operation of lighting during hours when construction is not occurring.

b. Removal of cables associated with lighting or signage that is to remain operational during construction shall be coordinated with Airport. Existing cables may be removed from underground conduits and sleeved with PVC conduit, secured with sandbags to provide temporary power during construction as required for facilitating removal of existing and construction of new duct banks, light bases, sign foundations and hand holes / junction cans.

c. Existing L-867 bases for taxiway lighting that are to remain for reinstallation of new fixtures shall be provided with new hardware. Existing mounting bolt hardware will likely require penetrating oil



application for removal. Contractor shall be prepared for task of removing existing hardware and broken bolts for installation of new hardware and fixtures on bases that are designated to remain.

- (1) Coordinate with Airport / Operations for NOTAMs and Lockout / Tag-out of all circuits affected by construction.
- (2) Remove indicated conduits, ducts and conductors from site and dispose of according to local regulations.
- (3) Material and equipment not designated for re-installation, including signs, light fixtures, and isolation transformers, shall be safely stored to protect from damage during construction then offered for salvage to the appropriate Airport personnel at the end of completion. Non-re-usable material, including conduit, concrete hand holes / pull boxes, foundations, base cans, and conductors, shall become the property of the Contractor and shall be removed from the site and disposed of according to Local Ordinances, at Contractor's expense.

d. Existing signage that is required to remain operational shall remain in place on existing foundation until installation of new sign is ready to be performed. Removal of existing mounting anchors for replacement with new shall also be included in demolition efforts.

e. Replacement of existing signage on existing foundation that also require re-connection to new circuit may remain in place until installation of new sign is ready to be performed. Existing cable may be removed from underground conduit and sleeved above grade in PVC, secured with sandbags, for temporarily feeding during construction to reconnect conduit and install new cable for connection to new circuit. Removal of temporary feed cables and conduit shall be completed after installation of new sign is completed.

f. Replacement of existing signage requiring removal of existing concrete foundations for reconstruction or relocation shall include the removal of existing sign and isolation transformer for temporarily mounting on steel strut in the same general area, secured with sandbags. Sign shall be temporarily fed as required during construction of new sign base. After construction of new base and installation of new sign, Contractor shall remove temporary sign and feeder. Both new and existing sign shall not be installed in same location without covers installed over new sign until ready for operation.

g. Removal of existing pull boxes shall include excavation to remove existing structures after cables have been removed, protection of existing conduit ends for reconnection to extend to new hand hole and backfill and compaction to restore the infield area.

100-3.3 Conductors. Installation of underground 5 kV series circuits and parallel circuit conductors are specified in Item L-108 of these specifications.

100-3.4 Grounding. All metal support structures, and metal enclosures shall be grounded in as indicated in Item L-108 and as detailed on the drawings. Grounding rods shall be 3/4-inch diameter by 10 feet long copper-jacketed steel. Grounding connections to ground rods where buried or encased shall be by the exothermic weld process, Cadweld or equal. Extruded, drawn or stamped-type ground clamps will not be acceptable. The resistance to ground shall not exceed 25 ohms.

100-3.5 Ground Rods. Grounding rods shall be 3/4-inch diameter by 10 feet long copper-jacketed steel as specified in Item L-108 and as detailed on drawings. Grounding connections to ground rods where buried or encased shall be by the exothermic weld process, Cadweld or equal. Extruded, drawn or stamped-type ground clamps will not be acceptable. The resistance to ground shall not exceed 25 ohms.

100-3.6 Ground Conductors. Equipment grounding conductors shall be insulated copper, except where shown on the project drawings to be bare, and sized as shown on the project drawings; and all grounds will be shown in accordance with Article 250 of the National Electrical Code, and Item L-108. Attachment of wire to supports, boxes, etc., shall be accomplished using approved ground lug attached with a separate stainless-steel screw, lock washer and nut. Screws used for support of the electrical enclosure shall not be used for connection of the ground wire. Pipe straps shall not be used for ground purposes.



COLOR CODING OF GROUND CONDUCTORS

TYPE OF GROUND CONDUCTOR	COLOR OF INSULATION
Grounding Electrode Conductor	Bare - No Insulation
Counterpoise Conductor	Bare - No Insulation
External Sign and Transformer	
Housing Ground Conductor	Bare - No Insulation
Equipment Grounding Conductor	Green (safety)

The multi-ground system supplements but does not replace the equipment-grounding conductor required by the National Electrical Code.

Each of these separate ground conductors is insulated in order to keep it distinct and not allow contact with any other conductor.

Electrical continuity of cable armor or shield shall be maintained. Grounding of the cable armor or shield shall be required at all terminations and shall be accomplished by connecting a #6 AWG solid bare copper wire to the cable armor or shield by means of a compression-type ground clamp installed within the terminating enclosure. Armor or shield ground wire shall be connected to the ground electrode conductor using split bolt connector, Burndy or equal. Grounding of direct earth burial (DEB) armored power and shielding control cable shall be at each end.

100-3.7 Identification. Transformers, panelboards, constant current regulators, splice cabinets, enclosures and other vault equipment shall be identified by nameplate of nonferrous metal or rigid plastic, engraved with 3/8-inch high lettering with information.

100-3.8 Contractor Testing and Submittals. The Contractor shall pretest all cable on the reel prior to installation and provide a copy of the test results to the Owner. The Contractor shall be responsible for repairs or replacement of any cable found defective after installation.

The Contractor shall test existing affected circuits prior to start of construction and the installed airfield lighting and miscellaneous power cables at the completion of this project. The results of the testing shall be provided to the Owner for review and acceptance. The Contractor shall be responsible for repairs or replacement of any cable found defective after installation.

Installation tests in addition to all tests contained in other L-Series Items shall be provided as follows:

Item	Test Required	Manufacturer's Rep. Present?
5 kV Rated Airfield Lighting and Power Cables (On the Reel, Not Including Equipment for Contractor Quality Control. Maybe deleted per-coordination with Engineer).	Megger check at 500 to 1000 Volts prior to installation. Values of insulation resistance for each reel shall be noted and given to the Construction Manager/ Owner for acceptance. It is expected that the readings will be greater than 1000 meg-ohms (1 gig-ohm).	No



Item	Test Required	Manufacturer's Rep. Present?
5 kV Rated Airfield Lighting and Power Cables (All Circuits Installed in This Project)	Megger check at 500 to 1000 volts at the completion of installation. Test every circuit for conductor-to-ground and conductor-to-conductor (between circuits) insulation resistance. Test results shall be tabulated and given to the Construction Manager/Owner for acceptance. It is required that the readings be a minimum of 150 meg-ohms.	No
5 kV Rated Airfield Lighting and Power Cables (All Circuits Installed in This Project)	Megger check at 500 to 1000 volts at the completion of installation. Test every circuit for conductor-to-ground and conductor-to-conductor (between circuits) insulation resistance. Test results shall be tabulated and given to the Construction Manager/Owner for acceptance.	No
5 kV and 600 Volt and Multi-pair Cables	If a power cable puller is used, continuous-tape pull tension readings for each section of cable shall be provided to the Construction Manager or Owner for review.	No

100-3.9 Notification of Testing. The Contractor shall notify the project RE and the Airport, a minimum of 48 hours in advance of system, or partial system, testing including, but not limited to, installed cable insulation resistance (Megger) testing, and operational testing of any modified lighting circuit.

METHOD OF MEASUREMENT

100-4.1 Remove Existing AWOS Equipment, Tower, Electrical Sub-panel, and Cables. Excavate and Remove Tower Foundation. Existing Grounding to Remain - Protect in Place. The quantity to be measured shall be for the disconnection and removal of existing AWOS sensors, equipment, electrical sub panel, cables, tower foundation, and existing underground conduits and grounding segments in accordance with the Plans and Specifications and as accepted. Existing concrete foundations, masts and equipment racks to remain for installation of new AWOS equipment per the Plans.. Existing equipment shall be offered to Airport for salvage or disposed of offsite in accordance with local ordinances.

100-4.2 New 30Amp, Single Phase, 12-Circuit Sub-panel, 100A Rated, NEMA 3R with Branch Circuit Breakers Complete. The quantity to be measured shall be for the provision and installation of a new 100-amp, 12 circuit, with 30 Amp Main Breaker, Nema 3R rated subpanel installed, including bolt-on branch circuit breakers and any additional strut supports required to mount new equipment.

100-4.3 New Strut Rack for AWOS Step-Down Transformer and Disconnect. Provide New Transformer Ground if Required. Remove Existing Wood Pole. This item shall consist of new strut power equipment rack with existing disconnect and transformer and will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR.



100-4.4 Electrical Vault Upgrades Including Installation of New Circuit Breaker, Removal of AWOS Contactor, and All Associated Wiring, Complete. This item shall consist of new circuit breaker for AWOS installed in existing panelboard at the electrical vault, removal of existing AWOS contactor, and all associated wiring and relabeling of equipment as required for a complete installation and accepted by the RPR.

BASIS OF PAYMENT

100-5.1 Electrical services. Payment will be made at the contract price for the electrical services completed and accepted. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete these items. The unit price of each of these items shall also include the Contractor's overhead, profit, and markup.

Payment will be made under:

Item L-100-5.1	Remove Existing AWOS Equipment, Tower, Electrical Sub-panel, and Cables. Excavate and Remove Tower Foundation. Existing Grounding to Remain - Protect in Place – per Lump Sum
Item L-100-5.2	New 30Amp, Single Phase, 12-Circuit Sub-panel, 100A Rated, NEMA 3R with Branch Circuit Breakers Complete – per Lump Sum
Item L-100-5.3	New Strut Rack for AWOS Step-Down Transformer and Disconnect. Provide New Transformer Ground if Required. Remove Existing Wood Pole – per Each
Item L-100-5.4	Electrical Vault Upgrades Including Installation of New Circuit Breaker, Removal of AWOS Contactor, and All Associated Wiring, Complete – per Lump Sum

END OF ITEM L-100



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, pigtails, 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. 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 3MTM 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. NOT USED

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 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 contaminants 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 coatings 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. – may be used by the RPR for areas that have high rates of lightning strikes. The counterpoise size is determined by the RPR. 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.



Reference FAA STD-019E, Lightning and Surge Protection, Grounding Bonding and Shielding Requirements for Facilities and Electronic Equipment, Part 4.1.1.7.

b. Isolation – used in areas where lightning strikes are not common. Counterpoise size is selected by the RPR. The isolation method is an alternate method for use only with edge lights installed in turf and stabilized soils and raceways installed parallel to and adjacent to the edge of the pavement. NFPA 780 uses 15 feet to define “adjacent to”.

The counterpoise conductor shall be installed 8 inches (203 mm) minimum below grade. The counterpoise is not connected to the light base or mounting stake. An additional grounding electrode is required at each light base or mounting stake. The grounding electrode is bonded to the light base or mounting stake with a 6 AWG solid copper conductor.

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 Isolation Method of lightning protection.

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™, or approved equivalent, or coated with coal tar Bitumastic® 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 100 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 Cable installed in duct bank or conduit shall be measured by the number of linear feet installed with primary connector kits, grounding conductor and grounding connectors ready for operation, and accepted by Owner / Engineer. Separate measurement shall be made for each single cable (1/C), cable pair (2/C) or multiple conductor feeder set, installed in duct bank or conduit with associated ground wire and connections included in Contractor’s price. The measurement for this item shall include additional quantities required for slack – 5’ per cable end at each light base, junction can or transformer housing and 15’ per cable end at each manhole or hand hole. No separate measurement will be made to multiply the number of individual conductors installed in a single conduit, in one installation effort.

108-4.2 Counterpoise wire and connections are considered incidental to the installation of duct bank or conduit, per item L-110. No separate payment will be made.

108-4.3 Ground rods shall be considered incidental to the installation of counterpoise, light base, transformer housing, sign or other grounding. No separate payment will be made.

BASIS OF PAYMENT

108-5.1 Payment will be made at the contract unit price for cable and equipment ground installed in duct bank or conduit, in place by the Contractor and accepted by the Engineer. 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	2 - #12 AWG, #12 Ground (Sensor & Obstruction Light Power)– per Linear Foot
Item L-108-5.2	2 - #10 AWG, #10 Neutral, #10 Ground (Sub-panel Feeder) - 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)

ANSI/IEEE STD 81	IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
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Federal Aviation Administration Standard

FAA STD-019E	Lightning and Surge Protection, Grounding Bonding and Shielding Requirements for Facilities and Electronic Equipment
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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. 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. Concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 25% Type F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa).



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), orange (telephone/fiber optic cabling) 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 five feet (5').

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, taxi-lanes, 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-inch wide 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 $\frac{1}{2}$ inch and $\frac{1}{4}$ -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 backfilling 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, top-soiling, fertilizing, liming, seeding, or mulching as 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. Removed cable may become property of the Contractor and recycled or disposed of off-site, in accordance with local ordinances (as specified in L-100).

METHOD OF MEASUREMENT

110-4.1 Measurement. Underground conduits and duct banks shall be measured by the linear feet of conduits and duct banks installed, including encasement, counterpoise conductor, ground rods and



connections, locator tape, trenching and backfill with designated material 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. 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, for drain lines and the termination at the drainage structure. 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 this item per the provisions and intent of the plans and specifications.

Payment will be made under:

Item L-110-5.1 1-1" PVC, Direct Buried (If Required) – per Linear Foot

Item L-110-5.2 1-3/4" PVC, Direct Buried (If Required) – 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-AWOS INSTALLATION OF AUTOMATED WEATHER OBSERVATION SYSTEM

DESCRIPTION

AWOS-1.1 General

- A.** This document describes an FAA-approved Level III-P/T Automated Weather Observation System (AWOS) in accordance with this specification and the FAA Advisory Circular No. 150/5220-16E. The system shall be installed at the specified location and in accordance with the dimensions and details shown in the plans.

AWOS-1.2 Related Documents. The General Provisions of the Contract, including General and Special Conditions, apply to work specified in this Item.

AWOS-1.3 Shop Drawings and Material Lists. Shall be in accordance with Item L-100, Paragraph 100-1.4, for the following equipment:

- a.** AWOS III P/T.
- b.** Circuit Breakers
- c.** Boxes and Enclosures
- d.** 600V Branch Circuit Cable
- e.** Grounding Conductor and Hardware

EQUIPMENT AND MATERIALS

AWOS-2.1 General

- A.** The Automated Weather Observation System and other equipment and material covered by FAA specifications shall have the approval of the Federal Aviation Administration, Washington, DC, 20591, as listed in Advisory Circular 15/5345-1, latest edition prior to bid opening.
- B.** All other equipment and materials covered by other referenced specifications shall be subject to acceptance through the manufacturer's certification of compliance with the applicable specification.

AWOS-2.2 AWOS System

- A.** The automated Weather Observation System (AWOS) shall be an FAA (type certified) system in accordance with AC No. 150/5220-16, latest edition.

AWOS-2.3 General Performance Standards

- A. Input Power.** AWOS equipment shall operate from a 120V AC ($\pm 5\%$), 60 Hz (± 5 Hz), 3-wire single phase service. The Data Collection Platform (DCP) enclosure shall be mounted to the AWOS tower in accordance with the manufacturer's specifications. The maximum service required shall be 30 amps.
- B. Loss of Power.** The AWOS system will return to normal operation without human intervention after a power outage. When power is restored, the system will not output erroneous data. The system shall have the capability of operating from an Uninterruptible Power Supply (UPS) should one be required.



AWOS-2.4 Operating Environment

- A. The AWOS equipment shall meet the requirements for operating in a Class 1 environment, as defined in FAA Advisory Circular 150/5220-16E.

AWOS-2.5 AWOS System and Sensor Specifications

- A. The AWOS System provided for this project shall, at a minimum, include and meet the following specifications.

AWOS SYSTEM AND SENSOR PERFORMANCE STANDARDS

AWOS-3.1 Wind Speed Sensor. The wind speed sensor shall be a 3-cup type with an output frequency which is proportional to wind speed. Periodic calibration shall not be required.

- A. **Range.** The sensor shall respond at a threshold of 2 knots and a maximum of at least 85 knots.
- B. **Accuracy.** The wind speed sensor should provide an accuracy of 2 knots or 10 percent RMSE, whichever is greater, with maximum error of 15 percent at any speed.
- C. **Resolution.** 1 knot.
- D. **Distance Constant.** The distance constant should be less than 10 meters.
- E. **Threshold.** Two (2) knots.

AWOS-3.2 Wind Direction Sensor. The wind direction sensor shall not require periodic calibration. This sensor should be aligned to true north and should withstand a wind speed of 85 knots without damage.

- A. **Range.** 1 degree to 360 degrees in azimuth.
- B. **Threshold.** 2 knots.
- C. **Accuracy.** Within 5 degrees (RMSE).
- D. **Resolution.** To nearest 10 degrees.
- E. **Time Constant.** Less than 2 seconds.

AWOS-3.3 Ambient Temperature Sensor. The sensor should be thermally isolated to accurately measure the environments below.

- A. **Range.** From -35 degrees to +55 degrees C (-30°degrees to +130°degrees F)
- B. **Accuracy.** One (1) degree F for the entire range of the sensor, with a maximum error of 2 degrees F.
- C. **Resolution.** Not greater than 1 degree F.
- D. **Time Constant.** Not greater than 2 minutes.



AWOS-3.4 Dew Point. Dew point shall be derived using temperature and relative humidity data. Algorithms within the AWOS Data Collection Platform (DCP) shall perform this derivation. The relative humidity sensor shall be thermally isolated in a motor aspirated radiation shield to accurately measure the atmospheric dew point temperature.

- A. Operating Range.** From -40°C to +60°C (-40°F to +140°F), 0 to 100% RH (Relative Humidity).
- B. Resolution.** Not greater than 1 degree F.
- C. Time Constant.** Less than 2 minutes.
- D. Accuracy.** Accuracy shall be as follows:
 - 1. 2°F dew point for dry bulb temperature of +30°F to +90°F (80% to 100% RH), with a maximum error of 3°F at any dry bulb temperature.
 - 2. 3°F dew point for dry bulb temperature of +30°F to +90°F (15% to 75% RH) with a maximum error of 4°F at any dry bulb temperature.
 - 3. 4°F dew point for dry bulb temperature of -20°F to +20°F (25% to 95% RH) with a maximum error of 5°F at any dry bulb temperature. The minimum dew point required is -30 degrees F.

AWOS-3.5 Pressure Sensor

- A. Design.** Two pressure sensors shall be provided, with provisions to accommodate a third as a backup. The sensors shall not require heaters. Pressure sensors shall be vented to the atmosphere. Each sensor shall have an independent venting interface.
- B. Range.** The sensor should be capable of measuring a pressure range at any fixed location of +1.5 to -3.0 inHG from the standard atmospheric pressure at that location. High pressure should be standard atmospheric pressure at -100 feet plus 1.5 inHG (+31.565 inHG). Low pressure should be standard atmospheric pressure at +10,000 feet minus 3.0 inHG (=17.58 inHG).
- C. Accuracy.** ± 0.01 inHg.
- D. Resolution.** The resolution should not be greater than 0.005 inHG.
- E. Differential Accuracy.** The sensor shall exhibit a maximum differential accuracy of 0.01 inHg or less between any two pressure measurements taken from the same sensor 3 hours apart.
- F. Maximum Drift With Time.** The maximum error shall be 0.02 inHG.

AWOS-3.6 Cloud Height Sensor

- A. Range.** The sensor shall measure cloud heights and the heights of obscuring phenomena aloft to 12,500 feet.
- B. Accuracy.** Under laboratory conditions, the sensor should provide an accuracy of 100 feet or 5 percent, whichever is greater.
- C. Resolution.** Not greater than: 50 feet surface to 5,500 feet; 250 feet from 5,501 to 10,000 feet; 500 feet above 10,000 feet.



- D. Sampling.** The sensor shall provide an output of cloud height at least once every 30 seconds when clouds are present. The sampling rate may be reduced to at least one sample every 3 minutes when no clouds are detected for the preceding 15 minutes.
- E. Detection Performance Accuracy.** Meet or exceed the requirements of FAA Advisory Circular 150/5220-16D.
- F. Eye Safety.** An interlock device in the laser power circuit shall be provided to disable the laser emission to the eyes of the technician or other.
- G. Optics Contamination.** An air blower shall be used to reduce the contamination of sensor optics. A signal shall be generated to indicate the amount of optics contamination, thereby indicating the need for optics cleaning.
- 1. Snow.** The ceilometer window shall remain clear of snow when subject to precipitation rate of 2 inches per hour for one hour at a temperature of 20°F.
 - 2. Ice.** The window shall remain clear of ice for 60 minutes under conditions of freezing, rain equivalent to buildup of 1/2 inch per hour thickness of clear ice.

AWOS-3.7 Visibility Sensor

- A. Range.** The visibility sensor shall determine visibility from 30 feet to 10 miles. The visibility sensor should be capable of determining visibilities from less than 1/4 mile to 10 miles.
- B. Resolution.** In terms of equivalent visibility, the sensor shall provide data to report visibility values as follows (in statute miles); less than 1/4, 1/4, 1/2, 3/4, 1, 1-1/2, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9 and 10 miles.
- C. Time constant.** The time constant shall not exceed 3 minutes.
- D. Accuracy.** The sensor shall agree with a transmissometer standard as follows:

Table 1. Visibility Sensor Accuracy Requirements.
(All values in statute miles)

Reference Transmissometer Reading	Acceptable Sensor Variance
1/4 through 1-1/4	±1/4
1-1/2 through 1-3/4	+1/4, -1/2
2 through 2-1/2	±1/2
3 through 3-1/2	+1/2, -1
4 and greater than 4	±1

- E. Ambient Light Sensor.** The visibility sensor shall contain an ambient light sensor (i.e., photocell) to measure the ambient luminance within its field of view, and to generate a signal to the visibility sensor to indicate whether the ambient light level is day or night. It shall indicate day for increasing illumination between 0.5 and 3 foot-candles (FC), and night for decreasing illumination between 3 and 0.5 FC. This sensor may be exposed to ambient light levels as high as 50 FC.

AWOS-3.8 Thunderstorm Detection Sensor Network. The sensor should detect the presence of a thunderstorm in the vicinity of the airport, should locate the thunderstorm, and should



provide this data in such a form that the information can be incorporated into the AWOS voice and data weather message, in accordance with FAA Advisory Circular (AC) 150/5220-16E.

AWOS-3.9 AWOS Data Processor.

- A.** The AWOS data processor shall perform the following functions: data acceptance, data reduction, data processing, and product dissemination (digital and voice).
- B.** The processor shall provide a computer-generated voice weather observation to a ground-to-air radio, (VOR<NDB< or VHF discrete) for transmission to pilots. The computer-generated voice weather observation shall originate from the outdoor AWOS tower site.
- C.** The processor shall have the capability to process observations from an unlimited number of sensors.
- D. Data Reduction.** The data reduction function shall consist of the processing of information prior to the actual algorithm processing. The AWOS data reduction software shall include quality control checks to ensure that the data received is accurate and complete and that the associated equipment is working properly before the weather algorithms are performed. If data from any sensor is erroneous or missing, (e.g., a sensor loses power, etc.), that parameter and all other parameters derived from the missing parameter shall be reported “missing” in the weather observation. The processor shall continue to sample data, and if the error condition is corrected, the weather parameter shall be reinserted in the AWOS report.
 - 1.** The processor shall periodically check reference or calibration points which correspond to the normal operating limits of the sensor.
 - 2.** The processor shall set upper and lower limits on the sensor output which correspond to the normal operating limits of the sensor.

AWOS-3.10 Operator Terminal (OT)

- A. Product Editing.** The Operator Terminal shall have the capability to do product editing. This function allows an authorized observer to initiate or change any observation product. A specific “editing” password shall control access to this function. Manual entries of weather phenomena not automatically observed shall be placed in the remarks section of the observation and will not be included in the voice message. In the case of sensor failure or an incorrect AWOS output, an operator shall have the capability to replace the incorrect parameter value with a missing symbol.

The Operator Terminal shall consist of a video display monitor with keyboard and printer. All necessary interface equipment, video display monitor, detachable keyboard, printer, and audio output equipment shall be supplied.

- B. Security.** The system shall require the operator to enter a security code in response to system queries prior to allowing him to proceed with the entry of data.
- C. Periodic Data Validation.** Where an operator terminal is used to modify the report, all manually entered data shall be automatically time tagged by the system. The data shall be valid until the next hourly or manually entered observation. In order to retain the manually entered data in the system, the operator shall be required to revalidate his entries hourly. The data shall be retained in the observation until the “on-the-hour” observation, when it must be revalidated.

AWOS-3.11 Voice Subsystem. The voice subsystem shall provide high quality computer-generated speech for output of the AWOS observation. A high-level error-checking scheme shall be incorporated to



prevent erroneous outputs. The voice subsystem shall provide the speech for the local ground-air radio broadcast and for telephone dial-up users.

The voice subsystem shall have the capability for the addition of up to two manually input voice message. The programming of the manual input voice messages shall be accomplished using a microphone. Security access code shall prevent unauthorized use. The system shall automatically play back the recorded message and allow the user to reprogram, delete or accept the messages.

A. The voice subsystem shall have the following features:

- 1.** The voice signal shall deliver a minimum of 1 milliwatt of power into a balanced 600-ohm line. The output amplitude shall be adjustable to nominal 0 db.
- 2.** The voice message shall be output continuously with an approximate 5-second delay between the completion of one message and the beginning of the next.
- 3.** If the voice message is in process of output when the new AWOS observation is received, the output message will be complete without interruption; voice transmission of the new AWOS observation will begin upon completion of the next delay time.
- 4.** The quality of the automated speech shall provide clear reception from telephone and air-ground radio receivers.
- 5.** The format and sequence of the voice message shall be in accordance with FAA order 7110.10, Flight Services Handbook. When any weather parameter is reported missing due to a disabled or inoperative sensor, as determined by internal AWOS checks, the voice report shall be "(parameter) missing," e.g., "wind speed missing," cloud height missing," etc., The UCT time of the observation will be given after the location identification.
- 6.** If a valid data update is not received prior to the start of the next voice transmission, the last valid data set received shall be used to compose the voice message. Failure to receive a data update for more than five minutes shall result in the termination of the voice output and generation of a failure message. In this event, the AWOS shall output the message (station identification) automated weather observing system temporarily inoperative."
- 7.** The system shall contain an automatic telephone answering device that will permit user access to the voice message via the public telephone system. The incoming call shall be answered prior to completion of the second ring, and the radio signal in progress at the time the call is received shall be placed on line. The voice subsystem shall automatically disconnect when the weather observation has been completely transmitted twice.
- 8.** Hook-up for telephone audio output on an assigned dial-up telephone number shall be provided by others.
- 9.** The system shall contain a headset or speaker for monitoring the voice output.

AWOS-3.12 VHF Transmitter. It is FAA policy that the output of the AWOS will be transmitted on an existing navigational aid voice outlet whenever possible. If there is no navigational aid available, then the output will be broadcast via a separate VHF transmitter. The transmitter operates in the 118-136 MHz band. The transmitter must have an FCC type acceptance and have the following operational parameters:

A. Channel spacing: 25 KHz



- B.** RF Power Outlet: 10 watts maximum
- C.** Frequency Stability: $\pm 0.001\%$ (-30°C to $+60^{\circ}\text{C}$)
- D.** Emission Type: 6A3
- E.** Spurious and Harmonic Emissions: 80 dB minimum up to 90% modulation.

AWOS-3.13 Equipment Enclosures. AWOS components not designed for outdoor use shall be located in the Terminal Building as shown in the plans and in accordance with manufacturer and FAA guidelines. All outdoor enclosures will be NEMA-4X enclosures.

AWOS-3.14 Concrete. The concrete shall have a minimum twenty-eight (28) days compressive strength of 4,000 PSI, in accordance with FAA Specification P-610, unless higher strengths are recommended by the equipment manufacturer.

AWOS-3.15 Reinforcing Steel. Reinforcing steel and bars shall not be used in the tower and sensor foundations. AWOS manufacturers shall submit foundation drawings showing the materials in the foundations.

AWOS-3.16 Conduit. Conduit shall be used between the AWOS tower and sensor foundations for both power and signal cables. The conduit shall meet the requirements of the National Electrical Code and local code.

AWOS-3.17 Wire and Control Cable. Wire and control cables shall meet the requirements of the National Electrical Code, local electric code and AWOS equipment manufacturer's recommendation. Control cables shall be the manufacturer's required number of pairs plus two spare pair. Each pair is to be individually shielded.

AWOS-3.18 AWOS Data Link.

- A.** AWOS system shall utilize radio transmission technology for transmitting AWOS data from the tower and sensors to the video display, printer, and audio output. The data shall originate at the tower site and broadcast via UHF discreet transmitter.

AWOS-3.19 Uninterruptible Power Supply. The Contractor shall provide a UPS to regulate power and provide back-up power supply source for power outages. The UPS shall be capable of powering the AWOS for a minimum of one (1) hour.

AWOS-3.20 Tower. The New tower shall be installed on new foundation and grounded per NEC and FAA grounding requirements.

AWOS-3.21 Painting. The tower shall be painted by the manufacturer with alternating bands of aviation surface orange and white in accordance with AC 70/7460-1. The band widths shall be $1/7^{\text{th}}$ of the height of the tower and perpendicular to the vertical axis of the tower with the bands at each end-colored orange. Paint and aviation colors referenced to in specifications should conform to Federal Standards FED-STD595, Colors as follows:



A. Orange Number 12197 (Aviation Surface Orange)

B. White Number 17875 (Aviation White)

AWOS-3.22 Obstruction Light. A dual L-810(L) LED obstruction light shall be placed within 5' (1.5m) of the top of the tower in accordance with FAA requirements and manufacturer's plans and specifications. The two lamps on the L-810 are to be wired in parallel on a dedicated circuit.

AWOS-3.23 Transient and Lightning Protection. AWOS equipment shall be protected against damage or operational upset due to lightning-induced surges on all sensor input lines, sensor supply lines and incoming power and data communication lines. Equipment (including electrical circuits and fiber optics modems) and personnel shall be protected from lightning surges and voltages, from power line transients and surges, and from other electromagnetic fields and charges. Lightning protection systems shall be designed and installed in accordance with the Lightning Protection Code, NFPA 780, and manufacturer's recommendations for all equipment structures.

AWOS-3.24 NADIN/WMSCR Interface. The AWOS shall be capable of interfacing to the equipment of a vendor that is approved to download information through the National Airspace Data Interchange Network (NADIN) and into the Weather Message Switching Center Replacement (WMSRCR). The second-tier vendor services are not part of this requirement.

AWOS-3.25 Test Equipment. The AWOS manufacturer shall make available for rental or purchase the necessary test equipment to maintain the AWOS equipment according to the manufacturer's FAA approved maintenance plan. This test equipment includes all standards as specified in the AWOS manufacturer's Operations and Manual.

AWOS-3.26 Spare Components. The Contractor shall supply the Owner with the necessary spare components to maintain the AWOS weather sensors according to the manufacturer's FAA approved maintenance plan. This equipment shall include any fuses, desiccant cartridges and printer ribbon as specified in the AWOS manufacturer's Operational and Maintenance Manual.

AWOS-3.27 Warranty / Maintenance Agreement. The Contractor or Manufacturer shall provide a one (1) year maintenance agreement that begins on the date of FAA commissioning. The maintenance agreement shall include all required inspections as defined by the AWOS manufacturer and all service required to restore the AWOS to service following a malfunction. The manufacturer / vendor warranties shall cover parts and labor if the equipment provided and installed cannot be certified.

CONSTRUCTION METHODS

AWOS-4.1 General

A. The installation and testing of the equipment shall be completed in accordance with the national electric code, local electric code, AWOS equipment manufacturers and FAA guidelines. The Contractor shall have a certified technician available and present for this checkout and commissioning of the system. The technician should have previous experience in commissioning an



AWOS III P/T System. If the technician cannot meet the requirements, the manufacturer will provide a representative to demonstrate the system for commissioning purposes.

A new grounding system complete with ground rods, bare copper conductor, exothermic and mechanical connections with trench and backfill may be required per Manufacturer requirements if the existing #4 copper grounding system is not considered suitable for new equipment.

AWOS-4.2 ELECTRICAL POWER

- A. The Contractor shall install new conduit to new sensor on new foundation and branch circuit conductors to all new sensors in new conduit to new foundations and Tower. New circuit breakers and TVSS shall be installed in new panelboard per Plans.
- B. The Contractor shall make all connections at the existing terminal building to connect the new equipment. This includes installing new keyboard and monitor in terminal building server room. New Central Data Processor (CDP) and radio transmitter shall be installed in the new equipment rack located in existing terminal building. The new equipment rack is 22" x 20.5" x 20" and is recommended to utilize existing receptacle and cable connections. If new AWOS equipment furnished does not fit in new equipment locations, the Contractor will be required to modify the existing power and cabling for extending to new equipment if remotely located.

METHOD OF MEASUREMENT

AWOS-5.1 New AWOS III P/T, Site Preparation - Sensors and Tower Foundations, Masts, Power and Communication Conduits, Enclosures and Cables, Installed and Commissioned, Per Manufacturer Requirements Complete. The Contractor shall install the AWOS, power and control cable, new sensors on new foundations, wireless transmitters, peripheral equipment, Operator's terminal, and associated equipment, cables, and conduit, site grounding, UPS and other incidentals shown on the plans for turnkey installation. The first year's operation/maintenance will be included in the bid price, as will payment for the AWOS installation. No separate measurements will be made for the remaining items necessary to complete the AWOS power and control system. The AWOS system equipment installed by the Contractor shall be measured as a lump sum, complete, in-place unit ready for operation, properly installed and accepted by the Engineer, and segmented as described in part 6 of this section. The test equipment shall be provided and utilized by the Contractor.

AWOS-5.2 New AWOS Tower on New Concrete Foundation, Adjusted to 1" Minimum Above Finished Grade Complete. This item shall include the installation of the new AWOS tower on new concrete foundation as specified in the Plans. This installation shall be measured as a lump sum, complete, in-place unit per the AWOS Manufacturer's requirements.

AWOS-5.3 New L-810(L) LED Dual Obstruction Light, Installed on New AWOS Tower Complete. A dual L-810(L) LED obstruction light shall be placed within 5' (1.5m) of the top of the tower in accordance with FAA requirements and manufacturer's plans and specifications. The two lamps on the L-810 are to be wired in parallel on a dedicated circuit.

AWOS-5.4 Install New CDP, UHF Wireless Radio Kit, Antenna and Required Cables in Terminal Building, Tested and Commissioned Complete Per Manufacturer



Requirements. This item shall include the installation of a new Central data Processor (CDP) inside the terminal building, complete with two additional remote monitoring terminals, UHF Wireless radio kit installed inside terminal building, and Antenna installed on eaves of the Terminal building on a 5ft mast, Per Manufacturers requirements. A UHF data link radio antenna (supplied by manufacturer) to be installed outdoors away from obstructions. The UHF Radio kit Antenna to be installed at the existing Terminal building per manufacturer requirements per the plans completed and accepted.

BASIS OF PAYMENT

AWOS-6.1 New AWOS III P/T, Site Preparation - Sensors and Tower Foundations, Masts, Power and Communication Conduits, Enclosures and Cables, Installed and Commissioned, Per Manufacturer Requirements Complete. Payment will be made at the contract unit price for the complete AWOS system installed in-place by the Contractor and accepted by the Engineer and the AWOS manufacturer. This price shall be full compensation for furnishing all materials incidentals necessary to complete this item. The Contractor shall provide a representative during the FAA on-site inspection and validation process as well as all equipment and labor for the first-year operation.

AWOS-6.2 - New AWOS Tower on New Concrete Foundation, Adjusted to 1" Minimum Above Finished Grade Complete. Payment will be made at the contract unit price for the installation of a new AWOS tower and foundation complete per Manufacturer's requirements.

AWOS-6.3 New L-810(L) LED Dual Obstruction Light, Installed on New AWOS Tower Complete. Payment will be made at the contract unit price for the installation of a new L-810(L) LED dual obstruction light installed on 30' AWOS tower, per Manufacturers requirements.

AWOS-6.4 Install New CDP, UHF Wireless Radio Kit, Antenna and Required Cables in Terminal Building, Tested and Commissioned Complete Per Manufacturer Requirements. Payment will be made at the contract unit price for the installation of a new Central data Processor (CDP) inside the terminal building, UHF Wireless radio kit installed inside terminal building, and Antenna installed on eaves of the Terminal building on a 5ft mast, per Manufacturers requirements.

Payment will be made under:

Item L-AWOS-6.1	New AWOS III P/T, Site Preparation - Sensors and Tower Foundations, Masts, Power and Communication Conduits, Enclosures and Cables, Installed and Commissioned, Per Manufacturer Requirements Complete - Per Lump Sum
Item L-AWOS-6.2	New AWOS Tower on New Concrete Foundation, Adjusted to 1" Minimum Above Finished Grade Complete - Per Lump Sum



Item L-AWOS-6.3	New L-810(L) LED Dual Obstruction Light, Installed on New AWOS Tower Complete – Per Each
Item L-AWOS-6.4	Install New CDP, UHF Wireless Radio Kit, Antenna and Required Cables in Terminal Building, Tested and Commissioned Complete Per Manufacturer Requirements – Per Lump Sum

END OF ITEM L-AWOS



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Appendix A - Construction Safety and Phasing Plan (Information Only)



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CONSTRUCTION SAFETY AND PHASING PLAN 1V6 Automated Weather Observing System (AWOS) Replacement

FAA Project No.: 3-08-0009-025-2025
CDOT Project No.: 25-1V6-02-C
Dibble Project No.: 1325004

Prepared For: **Fremont County Airport**
April 8, 2025





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1. GENERAL CONSIDERATIONS

1.1. Coordination

1.1.1. Automated Weather Observing System (AWOS) Replacement

Fremont County Airport (1V6 or Airport) is located 2 miles north of Florence and 4 miles east of Cañon City, in Fremont County, in the central region of Colorado. The Airport is owned and operated by Fremont County. It is at an elevation of 5,442-feet above Mean Sea Level (MSL) and covers 620 acres.

The airfield consists of the following surfaces:

- Runway 11-29 oriented northwest-southeast, that is 5,399-feet long and 75-feet wide, with an asphalt surface.
- Runway 17-35 oriented north-south, that is 1,835-feet long and 35-feet wide, with a turf and gravel surface.
- Taxiway 'A' is a full length taxiway on the north side of Runway 11-29 that is 35-feet wide with connector Taxiways A1 through A6 serving Runway 11-29.
- An apron and associated taxilanes serving aircraft hangars is located northeast of Runway 11-29. The apron is approximately 260,000-SF with aircraft tie-downs, self service fuel, and a concrete helicopter pad.

The existing Automated Weather Observing System (AWOS) was installed and commissioned in 2002. The existing AWOS-IIIPT, which has been in service for over 22-years, has exceed of its' minimum useful life of 10-years per Federal Aviation Administration (FAA) Order 5100.38D, *Airport Improvement Program Handbook (Change 1)*, Section 3-12, Table 3-7. The existing AWOS is experiencing failures, increased maintenance costs, and difficulties finding replacement parts and components. Replacing the existing AWOS III PT will maintain the level of reporting capabilities for local and transient pilots, improve data collection and reporting with current technologies, and increase reliability by decreasing system downtime due to maintenance and equipment failures. This increase in reliable and accurate meteorological data will enhance the safety for airport users and pilots transiting the local area. Major work items include:

- Install new AWOS foundations.
- Install new AWOS wind sensor tower.
- Install new AWOS electrical infrastructure.
- Install new AWOS III P/T array.
- Commission new system with FAA Inspector.

The limits of the project areas are shown on the *Construction Phasing and Access Plan*, which is appended to this document, in **Appendix CSPP-A**.

This Construction Safety and Phasing Plan (CSPP) provides specific information to the Contractor and/or Subcontractors selected to execute the construction contract for the *1V6 Automated Weather Observing System (AWOS) Replacement* (Project). This plan includes the requirements and procedures for accident prevention, safety requirements, and security considerations at the Airport. The Airport's safety objective is to achieve accident-free construction projects. Furthermore, the Contractor must be in full compliance with FAA Advisory Circular (AC) 150/5370-2G, *Operational Safety on Airports During Construction*. The CSPP and project safety and phasing requirements will be discussed in detail at both the Pre-Bid Conference and Pre-Construction Conference.



The Contractor and Subcontractors shall conduct their operations in a manner that will provide safe working conditions for all employees and the protection of the public and all others who may be affected by construction activities. Nothing contained in this plan is intended to relieve the Contractor, Subcontractors or suppliers of the obligations assumed by them under contract with the Airport or as required by law.

Safety must be an integral part of the job. Full participation, cooperation, and support are necessary to ensure the safety and health of all persons and property involved in the project. The purpose of phasing, marking, barricading, and lighting of airside construction areas is to delineate hazardous areas and prevent unauthorized incursions into the areas by personnel, vehicles, equipment, and aircraft during construction, and to positively separate construction activity from aircraft operations. The Contractor must submit Safety Plan Compliance Document (SPCD) prior to the Notice to Proceed.

A Pre-Construction Meeting will be scheduled prior to the issuance of the Notice to Proceed. Invitees and attendees will include the Airport Design, Construction, Operations, and applicable Emergency Response personnel; the Engineer/Responsible Project Representative (RPR); the Contractor's Project Superintendent; Pertinent Subcontractors; and representatives from the FAA. Relevant safety-related issues will be discussed in detail at this meeting.

Topics of discussion will include the FAA AC 150/5370-2G, *Operational Safety on Airports During Construction*; project scope; the RPR's responsibility and authority; identifying the Contractor's Superintendent; NOTAM responsibility; phasing and scheduling of work; Notice to Proceed date; safety during construction; security, badging and escorting requirements; quality control and testing; test reports; maintenance of record drawings; and other contract and Federal requirements.

1.2. Construction Progress Meetings

Weekly construction progress meetings will be held, for which the invitees and attendees will include at minimum Airport personnel, the RPR, the Contractor's Project Superintendent, and the lead personnel of each Subcontractor. In addition to the discussions on the progress of the project, operational safety procedures identified within this Safety Plan will be reviewed and discussed.

1.3. Scope or Schedule Changes

The Contractor will be required to immediately notify the Airport and RPR of any changes to the original project scope or schedule. The Airport will coordinate changes with the impacted tenants and stakeholders.

1.4. FAA ATO Coordination

The Airport staff will be responsible for coordinating with the FAA Air Traffic Organization (ATO) during construction, as required. There is no Air Traffic Control Tower (ATCT) at 1V6. The Airport will coordinate with the FAA's Denver Air Route Traffic Control Center at (303) 651-4248, as required.

2. PHASING

2.1. Phase Elements

The project includes three designated phases of work as shown in **Appendix CSPP-A – Construction Phasing and Access Plan**. Phasing has been designed to minimize operational impact to the airport.



The Contractor will have 42 calendar days to reach Final Completion. Phase specific locations, work items, and durations are included below.

Administrative Mobilization and Equipment Acquisition

3 Months (Approximate. Non-Contract Time.)

An Administrative Notice to Proceed (NTP) will be authorized to allow the Contractor to acquire all necessary components for the installation of the new AWOS-IIIPT array prior to beginning installation. Equipment may be stored on the airport, within the limits of the Contractor's Staging & Storage Area, as shown in **Appendix CSPP-A – Construction Phasing and Access Plan**.

Phase 1:

New AWOS-IIIPT Installation

Day-Time Operations – 30 Calendar Days

Phase 1 will consist of the removal of the existing AWOS array, wind sensor tower, and foundations, followed by the installation of new concrete foundations, wind sensor tower, electrical conduit and conductor, and all infrastructure required for the installation of the new AWOS-IIIPT sensors and components. The Contractor will have 30 calendar days to complete Phase 1.

Potential Stop Period:

Due to the limited availability of FAA Inspectors, the scheduling of Commissioning Inspection may take some time. If necessary, the contract time will be paused during this time.

Phase 2:

New AWOS-IIIPT Commissioning

Day-Time Operations – 5 Calendar Days

Five calendar days will be authorized for the installation and testing of all sensors and components for the new AWOS-IIIPT. The AWOS Manufacturer will be on site for the FAA Commissioning inspection in Phase 3.

Phase 3:

New AWOS-IIIPT Commissioning

Day-Time Operations – 2 Calendar Days

Two calendar days will be authorized for commissioning of the new AWOS-IIIPT with the FAA inspector on site. The Contractor will be on-site with the FAA Inspector during the commissioning Inspection. Phase 3 will be concurrent with the final two days of Phase 2.

Substantial Completion: 35 Calendar Days

Following the completion of Phase 3, a Substantial Completion Inspection will be conducted with the Contractor, RPR, Airport, and FAA. A punchlist will be compiled during the Substantial Completion Inspection and will include items to be addressed before Final Completion.

Punchlist

Day-Time Operations – 7 Calendar Days

The Contractor will be allowed 7 calendar days to address any punchlist items identified during the Substantial Completion Inspection.

Final Completion, Project Total: 42 Calendar Days



3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

3.1. Identification of Affected Areas

The areas affected by the project are identified in **Appendix CSPP-A – Construction Phasing and Access Plan**, located at the end of the report.

3.2. Closed or Partially Closed Facilities

No airfield closures will occur during this project. User access to the airfield and airport facilities will not be impacted during this project. Refer to **Appendix CSPP-A – Construction Phasing and Access Plan** for project limits and work areas.

3.3. ARFF Access Routes

There are no Airport Rescue and Firefighting (ARFF) services at the Airport. Although it is not anticipated that this project will impact emergency response routes, the Contractor will be required to coordinate with the Airport prior to construction.

3.4. Airport and Airline Support Vehicle Access Routes

This project will not interface with airline/FBO support vehicle access routes. The Contractor will be required to coordinate with Airport Operations prior to closure of any areas within the Air Operations Area (AOA). The construction haul road location is shown in **Appendix CSPP-A - Construction Phasing and Access Plan**. The Airport may modify haul road locations based on operational concerns.

3.5. Interruption of Utilities

No underground utilities used for the County or firefighting operations within the AOA are anticipated to be impacted by the construction of this project.

While every effort has been made to include the locations and depths of known utilities within the project areas, the Contractor will be required to locate utilities, and to pothole for utilities as needed, prior to beginning construction on the airfield. Protection of utilities may include, but is not limited to, flagging utilities, marking lines on pavement, placement of barricades along utility lines and at manholes. In addition, the Contractor will coordinate with FAA ATO/Technical Operations to obtain location of utility supporting NAVAIDs. Refer to the project *Special Provisions*, Section 50 for detailed direction for the location of underground utilities.

3.6. Affected Approach and Departure Surfaces

An FAA Form 7460-1, *Notice of Proposed Construction or Alteration* will be submitted for this project prior to bidding. Construction activity shall comply with the findings of any FAA Letters of Determination associated with this project. These letters include specific information for working on airports and around protected imaginary surfaces described in Title 14 CFR Part 77. Any findings will be based on the data submitted to the FAA in the FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, included in **Appendix CSPP-B – Draft FAA Form 7460-1 Exhibit**, which shows estimated equipment heights, locations, elevations, and proximities to operating runways and taxiways.



Equipment that penetrates the Part 77 imaginary surfaces require additional measures and notifications and must be approved by the FAA and Airport prior to work commencing. If needed, the Contractor will file an additional FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, with detailed information and actual equipment heights at different locations of the project. Construction cannot begin until the FAA issues a Letter of Determination on the impacts of this project on the Airport and the National Airspace System. As such, the FAA's airspace analysis should be included in the Contractor's schedule.

3.7. Construction Staging Area and Haul Routes

The Contractor's Staging and Storage Area, haul routes, and construction access are shown in **Appendix CSPP-A – Construction Phasing and Access Plan**. The Contractor's Staging & Storage Area is located outside all Runway and Taxiway Object Free Areas (ROFA and TOFA). Construction access areas and haul routes are established to minimize impact to airfield operations.

The Contractor Staging and Storage Area will be located directly south of the existing AWOS-IIIPT site. The Staging & Storage Area is located approximately 750-feet south of Runway 11-29, and 750-feet west of Runway 17-35. The Contractor will access their Staging & Storage Area from the west, by utilizing airport access gate No. 4 located off of Colorado State Highway 67, and then via the existing perimeter road inside the airport fence, refer to **Appendix CSPP-A – Construction Phasing and Access Plan**. The contractor's haul route has been designed to minimize interfacing with open airfield pavements and aircraft operations.

The Contractor will be required to supply a gate guard at any airfield access gate when the gate is left open. A gate guard will not be required as long as the gate is closed and locked. Construction access areas and haul routes will be marked or signed. If necessary, haul routes and access gate will be lighted at night.

Transient haul truck drivers, including deliveries, are required to check in with the Contractor before entering the airfield. The driver must be briefed by the Contractor on haul route location and appropriate procedures for driving on an airfield. The driver will then be issued an orange and white checkered flag to be mounted on the highest point of the truck or have a flashing amber or yellow beacon. At no time shall any driver be allowed to deviate from the designated haul route. The Contractor is responsible for all sub-contractors, deliveries, and any other affiliated party that accesses the airfield. Additionally, during times of low visibility or darkness, drivers shall utilize a flashing amber or yellow beacon.

3.8. Mitigation of Effects

The following procedures are established to maintain the safety and efficiency of airport operations.

3.8.1. Temporary Runway and/or Taxi Operations

No temporary provisions for Runway or Taxiway operations are required for this project.

3.8.2. Detours for ARFF and Other Airport Vehicles

The Contractor shall coordinate with the Airport/RPR whenever construction activities impact tenant or emergency access. Contractor vehicle movements to and from the site must conform to the approved access and Haul Roads or as directed by the Airport at the weekly construction meetings. The Airport will coordinate with all stakeholders any detours from existing Airfield Service Roads as needed.

3.8.3. Maintenance of Essential Utilities

Special attention shall be given to preventing unscheduled interruption of utility services and facilities, including airfield lighting and navigation equipment. The contractor shall locate and/or arrange for the location of all the underground utilities. When an underground cable or utility is damaged due to the Contractor's negligence the Contractor shall immediately repair the affected cable or utility. Full coordination between the Airport and construction personnel will be exercised to ensure that all utilities are fully protected prior to any excavation. Locations of cabling and other underground utilities will be marked prior to beginning of construction/excavation. The contractor will be required to contact all known utility agencies if there appears to be a potential impact, and pothole accordingly. If utilities are impacted, the Contractor will be required to provide required maintenance until the impacted utilities are restored.

While not anticipated, essential utilities for structures/buildings may be impacted during construction. The Contractor will be required to provide temporary means of service for any impacted utilities until the impacted utilities are restored.

3.8.4. Temporary ATC Procedures

There is no ATCT at 1V6. The Airport will coordinate with the FAA's Denver Air Route Traffic Control Center at (303) 651-4248, when required.

4. NAVIGATION AIDS (NAVAIDS)

4.1. NAVAID Critical Areas

This project will take place in the existing/future AWOS Critical Area. The existing AWOS-IIPT will be taken out of service at the beginning of the project, and will not broadcast weather data until certified by the FAA following completion of the installation.

No other NAVAID critical areas will be impacted during this project.

4.2. Effects of Construction on NAVAID Performance

The Contractor will be required to field verify the routing of the existing AWOS-IIPT Circuit and isolate from any other critical infrastructure at the beginning of the project. As a result, various circuits in the electrical vault will likely need to be powered down during the investigation. Any critical circuits that need to be secured will be coordinated closely with the Airport and RPR prior to powering off the affected circuits. Once the AWOS is isolated, no NAVIADs or airfield lighting are to be impacted.

No other NAVAIDS for Runway 11-29 will be impacted during any phase of construction. There are no NAVAIDS associated with Runway 17-35.

4.3. Protection of NAVAID Facilities

During all phases of construction, the Contractor will be required to prevent degradation to visual and/or electronic navigation signals between the ground and aircraft on approach. All work areas, haul routes, and the Contractor's Staging and Storage Areas are outside of all NAVAID facilities. In the event of an unanticipated power outage to any functional NAVAID, the Contractor shall immediately communicate with Airport staff and shall respond to restore power as soon as possible.

4.4. Required Distance from NAVAIDs to Construction Areas

All work, haul routes, storage areas, and material stockpiles are outside of 1V6 NAVAID Critical Areas.

4.5. Coordination Procedures with FAA/ATO

If necessary, the Airport staff will be responsible for coordinating with the FAA/ATO during construction. In support of this, the Contractor will provide construction schedules at least three weeks ahead of the proposed construction activities to the Airport.

5. CONTRACTOR ACCESS

5.1. General Items

5.1.1. Contractor Access Areas

The Contractor will be required to access the airport and the Staging & Storage Area from through airport access gate No. 4 located off of Colorado State Highway 67, and then via the existing perimeter road inside the airport fence, refer to **Appendix CSPP-A – Construction Phasing and Access Plan**. Any time access is required within the Air Operations Areas (AOA) the Contractor shall be responsible for assuring that no breaches or unprotected openings of the airport perimeter occur. The AOA is fenced and must remain fenced or protected at all times. The gates will remain closed and locked, or a guard will be provided at the Contractor's expense. The Contractor will furnish gate guards with rosters of his personnel and ensure that everyone has adequate identification. The following additional measures must also be taken:

- No person shall enter the contractor worksite without authorization. Any person found within the worksite without proper identification as described herein shall be considered unauthorized and shall be removed from the worksite.
- Persons authorized to provide escorts include Airport staff and designated contractor supervisors. Failure to provide an escort can result in loss of access and/or financial penalties.

5.1.2. 49 CFR Part 1542, Airport Security

Transportation Security Regulations under 49 CFR Part 1542 are *not* applicable to this project.

5.2. Location of Stockpiled Construction Materials

All Contractor materials, equipment and supplies shall be within the Contractor's designated Staging and Storage Area, see **Appendix CSPP-A – Construction Phasing and Access Plan**. All stockpile locations shall be marked, debris boxes covered, and areas kept neat and clean of debris.

For equipment that must remain in the work area, the following conditions must be met:

- Be located outside of active Runway/Taxiway Safety Areas and Object Free Areas.
- Be fenced or barricaded and lit with a red flashing/steady burning omni-directional around the equipment perimeter.
- Be coordinated at least 72 hours in advance with the RPR.
- The highest point of the equipment must be marked and lit with a red flashing/steady burning omni-directional obstruction light and an orange and white checkered flag.



Stockpiled materials shall be removed daily from within aircraft movement areas and kept within the Contractor's designated staging and storage area. Stockpiled material may be located within the Air Operations Area only upon prior coordination and approval of the RPR. No exceptions will be made for excavated or stored materials to remain within active Runway or Taxiway Safety Areas and/or Object Free Areas.

Furthermore, Construction activity shall be prohibited when equipment penetrates the imaginary surfaces described in Title 14 CFR Part 77 and any restricted area as defined in the most current edition of FAA AC 150/5300-13B, *Airport Design*, unless a favorable airspace finding has been made by the FAA and the Airport and approved by the Airport. Equipment that penetrates the Part 77 imaginary surface(s) must display an orange and white checkered flag during daytime operations and a red obstruction light during nighttime use.

5.2.1. Stockpiles within Runway Object Free Areas (ROFAs)

ROFAs have been identified on the construction plans and exhibits, reference **Appendix CSPP-A - Construction Phasing and Access Plan**. There shall be no stockpiling or storing of equipment within any ROFA.

5.2.2. Proper Stockpiling of Materials

Stockpiled materials must be stabilized with water in order to avoid dust during windy conditions. Daily inspections by the Contractor will be required of the stockpiles and other areas within the construction limits that may be affected by windy conditions. Construction Administration personnel will also be performing daily inspections of these areas to ensure compliance with this aspect.

5.3. Vehicle and Pedestrian Operations

5.3.1. Construction Site Parking

Construction parking will be allowed in the Contractor's Staging & Storage Area, which is outside of all TOFAs and ROFAs. Personal vehicles are only authorized in the Contractor's Staging & Storage Area.

5.3.2. Construction Equipment Parking

Construction equipment parking will be in the Contractor's Staging & Storage Area for any equipment that is not in use. See Section 5.1.1 - *Contractor Access Areas* for further information. No construction equipment can be parked or stored in any RSA, TSA, ROFA, or TOFA.

5.3.3. Access and Haul Roads

Access and haul roads on Airport property will be marked appropriately, and may be delineated with the use of low-profile barricades, flagging, temporary construction fencing, escorts, or a combination thereof. Contractor access and haul roads will be reviewed and approved by the Airport before the start of construction.

Although not anticipated, should the Contractor require access to any active airfield pavement, further safeguards to the sections below are required:

- Construction traffic must operate at a maximum speed limit of 15mph.
- Construction traffic must give way to aircraft. Aircraft will not be detoured from the equipment haul road.
- The haul road must be kept clean and clear of debris to allow safe passage of aircraft.
- Construction traffic must stop and check that the haul route is clear of aircraft traffic prior to entering the taxiway or apron area.

No access to any runway is required for this project. Runway access requires an escort from the Airport or RPR.

5.3.4. Marking and Lighting of Construction Vehicles

All Contractor and Subcontractor vehicles must be properly marked with the company name at least four (4) inches in height on both sides of the vehicle. All vehicles must have a 3' x 3' orange and white checkered flag at the tallest point on the vehicle for daytime construction activities, and a flashing amber or yellow beacon, mounted at the highest point, for nighttime construction activities.

All vehicle marking and lighting must comply with the most recent version of FAA AC 150/5210-5D, *Painting, Marking and Lighting of Vehicles Used on an Airport*. Contractor's vehicles are referred as "other vehicles" in FAA AC 150/5210-5D, *Painting, Marking and Lighting of Vehicles Used on an Airport*.

5.3.5. Pedestrian and Vehicle Access and Operations

For the purposes of this project, the Air Operations Area (AOA) is defined as any area within the secured (fenced) area of the Airport except the Contractor's Staging and Storage Area. No vehicle shall operate within the AOA:

- In a careless or negligent manner, including the use of cellular telephones.
- With disregard of the rights and safety of others.
- At a speed or in a way which endangers persons or property.
- While the driver is under the influence of drugs or alcohol.
- If such vehicle is loaded or maintained as to endanger persons or property.
- Without constant observance for operating aircraft.

When on the AOA, pedestrians and vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when crossing a runway, taxiway, or any other area open to aircraft operations. Escorted vehicles and pedestrians must remain with their escort at all times. The Contractor shall be aware of boundaries to AOA at all times to avoid any vehicle/pedestrian deviation that could lead to any unauthorized entry onto AOA and aircraft movement area. **Aircraft always have the right-of-way.**

5.3.6. Vehicle Driver Training Requirements

There is no requirement for the Contractor to attend an Airport driver training course. However, the Contractor is responsible for briefing all drivers on location and limits of the haul route, and limits of construction to prevent any construction personnel from entering prohibited or protected areas. It is imperative that all drivers understand that aircraft always have the Right-of-Way. All vehicles must yield to all aircraft.

5.3.7. Two-Way Radio Communications Procedures

Construction personnel engaged in activities involving unescorted operation on aircraft movement areas must observe the proper procedures for communications, including using appropriate radio frequencies at airports. When operating vehicles on or near open runways or taxiways, construction personnel must understand the critical importance of maintaining radio contact with aircraft, through Airport Operations personnel and CTAF. All Contractor radio communications on airport frequencies shall be controlled by Airport Operations. **Contractor personnel are not authorized to communicate directly with aircraft via radio.**

The Contractor's Superintendent and Project Manager may be required to have radios for this project to be used during the construction hours. Airport Operations will control communication between airport users and construction operations.

5.3.8. Maintenance of Airport Secured Area

The Contractor will be required to maintain situational awareness for the duration of this project, and will be required to report suspicious situations, persons, and/or materials to the nearest Airport employee.

6. WILDLIFE MANAGEMENT

Construction contractors must operate in a manner that prevents attracting wildlife on or near the airport by controlling and removing waste, loose materials, standing water, tall grasses, and areas that allow for wildlife access. See AC 150/5200-33C *Hazardous Wildlife Attractants on or Near Airports*.

6.1. Trash

The Contractor shall perform on-going inspections of the work areas, including the Contractor's Staging and Storage Area, haul routes, and work site, to remove any trash, debris, and food scraps, and place these items in an appropriate trash receptacle. Trash receptacles, regardless of type and size, must always be covered and secured to eliminate the possibility of contents escaping. All receptacles shall be emptied at least once per week or more often. Special attention may be required on weekends when no one is on site.

6.2. Standing Water

Construction operations shall minimize the potential for standing water. When water begins to stand on site, the Contractor shall begin pumping water to drain the area within 24 hours to prevent the attraction of wildlife.

6.3. Tall Grass and Seeds

When necessary, the Contractor shall mow areas under his/her responsibility, including, but not limited to, project site, Staging and Storage Areas, and exclusive-use haul roads, to prevent the growth of vegetation over 6-inches. Requirements for seeding and turf establishment should comply with the guidance in FAA AC 150/5370-10H, *Standard Specifications for Construction on Airports, Items C-102 Mobilization & T-901 Seeding*, included in this project's *Federal Civil Technical Specifications*.

6.4. Poorly Maintained Fencing and Gates

The Contractor must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel. The Contractor shall close and lock any airfield access gates that are not actively in use. Any fencing and temporary gates installed by the Contractor shall be properly maintained to prevent the intrusion of wildlife and unauthorized people.

6.5. Disruption of Existing Wildlife Habitat

It is not anticipated that the construction activities will disrupt any existing wildlife habitats. However, the Contractor shall report any significant wildlife sightings within the AOA to the nearest Airport employee. A significant wildlife sighting shall be considered any presence of wildlife of a size, or in numbers, capable of creating a hazard to local pilots such as a wildlife strike, multiple wildlife strikes, substantial damage to an aircraft as a result of a wildlife strike(s), or ingestion into an aircraft engine as a result of a wildlife strike(s).

6.6. Airport Wildlife Management Procedures

The Contractor will be required to follow any Airport Wildlife Management Procedures that are in place at the airport; however, at a minimum the Contractor will be required to perform the following:

- Control trash, debris, and standing water in areas under the Contractor's control.
- Close and lock any airfield access gates that are not in use.
- Report any significant wildlife sightings within the AOA to the nearest Airport employee.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. The contractor must not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD must be continuously removed during the construction project. Fencing (other than security fencing) or covers may be necessary to contain material that can be carried by wind into areas where aircraft operate. For more information, see FAA AC 150/5210-24, *Foreign Object Debris (FOD) Management*.

This project will include the movement of construction vehicles on and adjacent to active airfield pavements that may track materials onto aircraft movement areas. The Contractor will be required to actively monitor and address haul routes for vehicle tracking. Once any portion of any construction phase is ready to be opened to aircraft traffic, the Contractor, RPR, and Airport personnel shall walk the area to determine that all FOD that may have been generated is no longer present. In addition, the Contractor will be required to keep water on construction areas to minimize the possibility of FOD generated by wind.

The Contractor will be required to conduct FOD checks at the end of each working shift/day to remove any FOD that has made its way onto the airfield pavements from the Contractor's construction activities. Airport Operations and Construction Administration personnel will be present for these FOD checks to ensure compliance.

8. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT

Any hazardous or regulated waste material produced by the Contractor's operations shall be properly disposed of at the Contractor's expense pursuant to all local, state, and federal regulations. The Contractor may be required to provide test results to confirm that a contaminated area has been properly remediated.

The contractor will be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks from construction vehicles and equipment operating on the airport. Any hazardous materials situation that poses a threat to safety or property shall be immediately reported to emergency personnel, by dialing '911', and to the nearest Airport employee.

9. NOTIFICATIONS OF CONSTRUCTION ACTIVITIES

9.1. Maintenance of a List of Responsible Representatives/Points of Contact

A full list of Points of Contact and Contact Procedures will be developed prior to the Pre-Construction Meeting for this project. Under normal circumstances, all communications concerning the construction project between airport stakeholders and the Contractor shall be channeled through the RPR, who shall be the primary point of contact for all communications concerning the construction project. Matters relating to Airport Operations will be handled through the Airport, with assistance from the RPR and/or Contractor as needed. Table 1 includes a list of important Airport Operations Contacts.

TABLE 1: AIRPORT OPERATIONS CONTACTS

1V6 Airport Contacts		
Airport Manager – Wes Brandt	719-371-0634	Mon-Fri, 8:00 am to 4:00 pm
On Duty Airport Technician	719-784-3816	7 Days/Week, 8:00 AM to 5:00 PM

This list shall be included in the Contractor's SPCD.

9.2. Local ATO/Technical Operations Personnel

The Airport will be responsible for all communications with the local ATO/Technical Operations.

9.3. ATCT Managers on Duty

There is no ATCT at 1V6.

9.4. Authorized Representatives to the FAA's Operational Control Center (OCC)

The Airport will develop a list of authorized representatives to the OCC prior to construction commencing. This list will be provided to the OCC by the date of the Pre-Construction Meeting.

9.5. Notices to Airmen (NOTAM)

Construction NOTAMs will be filed by the Airport staff 72-hours prior to construction beginning in the area which the NOTAM references, or prior to any change in airfield conditions which may affect operations or safety. The Contractor will be required to submit pertinent information to the airport for any construction items that would require the issuance of a NOTAM a minimum of 2 weeks prior to the work being performed. Once a hazard identified by a NOTAM no longer exists, Contractor shall notify the RPR and Airport Operations to inspect the condition and cancel the NOTAM.

9.6. OCC Notification about Closed and/or Hazardous Conditions on the Airfield

The Airport staff will be responsible for notifying the OCC about closed facilities and/or hazardous conditions at the Airport. The OCC will be notified about closed facilities as soon as an approved schedule is received. Unanticipated hazardous conditions will be immediately relayed to the OCC by Airport staff.

9.7. Emergency Notification Procedures

In the event of a serious injury requiring medical attention and/or any emergency situation that affect the operational safety of the airport **call ‘911’ immediately**. Following a call to ‘911’, the Contractor shall report the incident to the Airport at 719-784-3816.

The Contractor shall submit to the RPR a list of personnel who can be contacted 24 hours a day, seven days a week and can respond in a reasonable time frame regarding any possible emergency on the work site. The list must include names, job titles and phone numbers. Table 2, below, includes several on-call (24-Hour) emergency contacts for the Airport:

TABLE 2: AIRPORT EMERGENCY CONTACTS

1V6 Airport Emergency Contacts	
Emergency	911
Combined Regional Communications Authority (Fremont & Custer County - Police, Sheriff, Fire, & EMS)	719-792-6411
Hospital (Common Spirit – St. Thomas More Hospital)	719-285-2000
Airport Manager – Wes Brandt	719-371-0634
Project Manager (Dibble) – John Cessar	303-475-2623
Construction Inspector (Dibble)	TBD

9.8. Coordination with ARFF for Non-Emergency Issues

No ARFF services are located at 1V6. For any non-emergency issue, the Contractor may notify Airport staff.

9.9. Notification to the FAA and Airport Users

All proposed construction activities that affect operations at the Airport will be immediately relayed to all Airport Users and the FAA by way of meetings, advisories, NOTAMs and the filing of FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, as appropriate (minimum of 60 days prior to the proposed construction), all issued by one of the Airport’s designated staff or RPR.



This project is phased in order to maintain an operating airfield; therefore, each phase and subphase will likely require additional information to be passed on to the Airport Users as the project progresses. NOTAMs and project advisories will be distributed three days prior to a new construction phase which may affect normal operating conditions at the Airport. Anticipated night work by the Contractor will need the Airport's approval prior to proceeding with the night work.

9.10. FAA Notification under CFR Parts 77 and 157

An airspace case will be created for the project to notify the FAA of operational impacts under Part 77 and Part 157. FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, and this Construction Safety and Phasing Plan for this project will be uploaded to the FAA OE/AAA website for compliance with 14 CFR Parts 77 and 157. Refer to **Appendix CSPP-B – Draft FAA Form 7460-1 Exhibit**, for the information that will be submitted to the FAA. The information that will be submitted in the initial FAA Form 7460-1 are estimations of anticipated equipment heights and locations. The Contractor will be responsible for submitting any additional FAA Forms 7460-1 if actual equipment and location differ from the initial submittal.

9.11. Reimbursable Agreements for Flight Checks

No Flight Checks are anticipated for this project.

10. INSPECTION REQUIREMENTS

10.1. Daily and Interim Inspections

Daily inspections will be required for areas with haul routes on active airfield pavements to ensure that Foreign Object Debris (FOD) is minimized. In addition, daily inspections of Contractor access areas will be performed to help ensure safety of the airfield. Daily inspections will be conducted by an Airport Operations employee, a Contractor representative, and a Construction Administration field representative. Airport staff will conduct daily inspections of areas affected by construction activity, with a portion of the inspection conducted at night.

Special inspections will be required for airfield facilities serving areas that are ready to be re-opened to aircraft traffic after certain phases of the project. Special inspections will be attended by an Airport Operations employee, a Contractor representative, and a Construction Administration field representative. All discrepancies noted in the inspection must be corrected to the satisfaction of the RPR prior to the Contractor leaving the worksite. The Airport will conduct special inspections when required for construction activities that may affect the safety of aircraft operations.

Should any inspection reveal any FOD concerns, the Contractor shall have a crew ready to remove any FOD prior to reopening the pavements. Should any inspection reveal work that does not meet the project Contract requirements or that is deficient in any way, the Contractor shall mobilize a crew as soon as possible to remedy the deficient areas to avoid prolonging the continued closure of the area(s).

10.2. Final Inspections

Inspections will be required at the Substantial Completion and Final Completion phases of the project. These inspections will be attended by the Contractor, Airport Director, Airport Operations/Maintenance Supervisor, the RPR, the FAA, and Construction Administration representatives. A punch list will be developed at the Substantial Completion inspection, and any items placed on the punch list will be required to be completed within 5-calendar days. Following the Substantial Completion inspection, the Final Inspection will be scheduled after completion of punch list items, and after the FAA has reviewed and approved QA test results. The airport will conduct a final inspection of areas affected by construction activity prior to reopening these areas for aircraft operations.

11. UNDERGROUND UTILITIES

Prior to beginning construction on the airfield, the Contractor will be required to locate and pothole any existing utilities in the project areas that may conflict with project elements. Protection of utilities may include, but is not limited to, flagging utilities, marking lines on pavement, placement of barricades along utility lines and at manholes. In addition, the Contractor will coordinate with FAA ATO/Technical Operations to obtain location of utility supporting NAVAIDs.

Refer to the *Special Provisions*, Section 50 for detailed direction for the location of underground utilities. Stakes and markers will be removed from Airport Operations Areas as soon as possible. At the end of the project, the contractor will make a final inspection to ensure all stakes are removed.

12. PENALTIES

The Contractor will be required to enforce his company's safety policies with the employees working on this project. In addition, the Airport enforces policies that are in place to protect the safety of the Airport property, its users, and the local Airspace. Enforcement of these policies include, but are not limited to, the following:

- Informal conversations with the subject person or party
- Formal meetings/conversations with the subject person or party and their supervisors/managers
- Formal written notices of non-compliance from the Airport
- Immediate removal from Airport property
- Notification of law enforcement personnel for persons that cause situations posing dangerous threats to property or personal safety.

Due to the safety and security precautions necessary at the Airport, failure of the Contractor to adhere to the prescribed requirements/regulations can result in consequences that may jeopardize the health, welfare and lives of the customers and employees at the Airport, as well as the Contractor's own employees. Therefore, if the Contractor is found to be out of compliance with the security, airfield badging/licensing and airfield safety requirements by either the Airport's personnel or the RPR or his representatives, the Airport may penalize the Contractor as identified in Table 3 on page 16. Fines/Penalties are based on the severity of a violation. The Airport reserves the right to assess civil penalties in accordance with the current revision of Fremont County Airport's *Rules and Regulations*. Additional penalties may be enforced by the FAA.

TABLE 3: 1V6 VIOLATION PENALTIES

Event	Penalty
Vehicle/Pedestrian Deviation	Revocation of Access/Loss of Work Privileges on the Airport
Failure to follow direction by Airport Operations or RPR/Inspector	Revocation of Access/Loss of Work Privileges on the Airport
Failure to follow Lock-Out/Tag-Out Procedures	Revocation of Access/Loss of Work Privileges on the Airport
Unsafe Work Activities as deemed by Airport Operations or RPR/Inspector	Revocation of Access/Loss of Work Privileges on the Airport
Continual negligence to remove any FOD within the AOA caused by construction personnel, equipment, or operations	Revocation of Access/Loss of Work Privileges on the Airport

13. SPECIAL CONDITIONS

Special unforeseen conditions or circumstances may require the activation of special procedures by the Airport. In cases involving aircraft emergencies or distressed aircraft, the Contractor may be required to temporarily halt construction activities and immediately vacate the area in which he is working. The nearest Airport Operations employee will be expected to notify all Contractor personnel in the vicinity and promote safe and orderly removal of all Contractor personnel and equipment to an area that is no longer in conflict with the emergency at hand. The Contractor will be expected to immediately comply with all Airport personnel directions and may not return to the subject work area until given permission to do so.

In the event of low-visibility conditions, or other conditions which may signal the need for additional unimpeded space next to runways or taxiways, the Contractor may be required to move to another work area of the project or temporarily stop work. The Contractor will be made aware of the possibility of these situations during the Pre-Construction Meeting.

14. RUNWAY AND TAXIWAY VISUAL AIDS

14.1. General

The Contractor will ensure areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed taxiways. Throughout the duration of the construction project, the Contractor will continuously verify that the affected areas remain clearly marking and visible at all times; and that marking, lighting, signs, and visual NAVAIDs remain in place, are operational, and continue to perform their functions during construction. Visual NAVAIDs that are not serving their intended function during construction must be temporarily disabled, covered, or modified as necessary.

14.1.1. Airport User and FAA Notification Procedures

During the field verification and isolation at the beginning of the project, the Contractor shall coordinate any airfield electrical shutdowns with the Airport/RPR prior to de-energizing any circuits. Airport staff will make appropriate notifications to airport users for planned airfield closures, and issued NOTAMs as required.

14.2. Permanent Markings

This project does not include any permanent pavement markings.

14.3. Temporary Markings

This project does not include any temporary pavement markings.

14.4. Lighting and Visual Aids

Lighting for all barricades used within the AOA shall be red and shall be a steady-burn or blinking light. All barricading and lighting shall conform to the details in the plans and specifications. Low-profile barricades shall be placed with no gaps to prevent ground vehicle traffic from moving onto active airfield pavements (barring a deliberate act), and alert aircraft traffic of closed facilities.

14.5. Signs

Airfield signage illuminated to indicate an open facility that is actually closed due to construction shall be covered and secured with a material that prevents light leakage. Signs may be partially covered, as a number of signs have multiple panels. In this case, only the affected panels shall be covered.

15. MARKING AND SIGNS FOR ACCESS ROUTES

Temporary signing used for Contractor access/haul routes, open trenching or other hazards shall be clear, concise, reflective, and large enough to minimize safety-related issues. All temporary signage shall meet the requirements of the most current version of FAA AC 150/5340-18G, *Standards for Airport Sign Systems* and, to the extent practicable, with the MUTCD and/or State highway specifications. All temporary signs shall also be properly weighted and/or secured to withstand site and elemental conditions.

16. HAZARD MARKING AND LIGHTING

16.1. General

Hazard marking, lighting, and signing prevent pilots from entering areas closed to aircraft, and prevent construction personnel from entering areas open to aircraft. As described below, the Contractor will install warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting must also be installed to identify open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. This includes markings to identify FAA, airport, and National Weather Service facilities cables and power lines; NAVAID critical areas; airport surfaces, such as RSA, OFA, and OFZ; and other sensitive areas to make it easier for contractor personnel to avoid these areas.

16.2. Equipment

16.2.1. Barricades

Should barricades be required, all barricades adjacent to any open runway or taxiway/taxilane safety area, or apron must be as low as possible to the ground, and no more than 18-inches high, exclusive of supplementary lights and flags. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3-inches above grade, per FAA AC 150/5370-2G, *Operational Safety on Airports During Construction*. Minimum barricade locations have been identified in **Appendix CSPP-A – Construction Phasing and Access Plan**. Barricade placement and pavement marking obliteration may be adjusted at the discretion of the Airport to accommodate specific airport operational needs. For construction areas that do not include aircraft operating areas, vertical panel barricades may be used to prohibit vehicle and pedestrian traffic. All barricades must have either flashing or steady burn red lights.

Barricades, temporary markers approved by the Airport, and any other warning equipment placed or left in areas adjacent to any open aircraft movement area, (i.e. runway, taxiway, taxilane, etc.), shall be as low to the ground as possible, and not more than 18-inches in height, (unless otherwise noted on the phasing plans). All barricades and temporary markers shall also be properly secured to withstand the site and elemental conditions. All barricading requirements regarding type, spacing, etc. were provided in the plans and are further identified in the Contract Documents, specifically the *Special Provisions*, Section 60. Low-profile barricades shall be used and shall be reflective, have an omni-directional steady-burning or flashing red LED light, and shall be properly secured (screwed-in). Clamps or straps will not be allowed.

16.2.2. Lights

Red lights on low-profile barricades shall be of the omni-directional, flashing or steady-burn type. The rate of flash and illumination, as well as barricade reflectivity, shall meet the requirements of the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). Barricade lights shall be mounted on barricades and spaced at no more than 10 feet. Lights must be operating between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. If operated by photocell, the Contractor must turn them on manually during periods of low visibility during daytime hours.

The Contractor shall provide additional lighting if determined necessary by Airport Operations.

16.2.3. Supplement Barricades with Signs

Although no Temporary Barricade Signage is anticipated, Temporary Barricade Signage shall be installed when determined necessary by Airport Operations, i.e. “Construction Ahead” or “No Entry”.

16.2.4. Maintenance

The Contractor shall designate an employee (or Subcontractor) to be responsible for the regular maintenance of barricades and lighting, if used. No more than 10% of barricades lights shall be unlit, and nor more than two (2) consecutive barricade lights. In addition, the Contractor will be required to respond to the airport within one (1) hour to perform any emergency maintenance on any barricades or lighting and ensure functional operation of all hazard lighting and barricades 24-hours per day, 7 days per week. Barricading and lighting equipment shall be secured to prevent blow-down. This may include the use of water-filled items, sandbags, and/or flat heavy footings.

17. WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION

The Contractor shall provide adequate lighting during any nighttime construction. A lighting plan shall be submitted by the Contractor and approved by the Airport and RPR, per FAA AC 150/5370-10H, *Standard Specifications for Construction on Airports, Item P-401 Asphalt Mix Pavement*, included in this project's *Federal Civil Technical Specifications*. Lighting equipment must adequately illuminate the work area if the construction is to be performed during nighttime hours. Additionally, it is recommended that all support equipment, except haul trucks, be equipped with artificial illumination to safely illuminate the area immediately surrounding their work areas. The lights should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. Light sources shall be positioned and adjusted to aim away from the active runways and aircraft operating areas to prevent blinding effects on pilots. Shielding may be necessary. Light towers must be removed from the construction site when the area is reopened to aircraft operations.

18. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS, OBJECT FREE AREAS, OBSTACLE FREE ZONES, AND APPROACH/DEPARTURE SURFACES

18.1. General

Runway and taxiway safety areas, OFZs, OFAs, and approach surfaces are shown on drawings included in **Appendix CSPP-A – Construction Phasing and Access Plan**. Protection of these areas includes limitations on the location and height of equipment and stockpiled material, in accordance with the findings determined by the FAA from information submitted in FAA Form 7460-1, *Notice of Proposed Construction or Alteration*.

18.2. Runway Safety Area (RSA)

18.2.1. Construction within Runway Safety Areas

No Construction will occur within any RSA during this project.

18.2.2. Adjustment of Runway Safety Area (RSA)

RSAs for Runway 11-29 and 17-35 RSAs will not be adjusted during this project.

18.2.3. Required Distance for Blasting Operations

Blasting is not authorized on this project.

18.2.4. Erosion Control

The Contractor will be required to maintain satisfactory erosion control Best Management Practices (BMPs) while work is being performed. Upon completion of the work, the Contractor will be required to leave the area in accordance with the specification standards, or as identified in the plans and comply with local, state, and federal regulations for erosion control.

18.3. Excavations

18.3.1. Requirements for Open Procedures

No Construction will occur within any RSA or ROFA during this project.

18.3.2. Appropriate Covering of Excavations within RSA

There will be no excavations within the any RSA or ROFA during this project.

18.3.3. Marking of Excavations and Open Trenches

There will be no excavations or open trenches within any RSA or ROFA during this project.

18.4. Runway Object Free Area (ROFA)

No work within any ROFA will be allowed during this project.

18.5. Taxiway Safety Area (TSA)

18.5.1. Construction Within Taxiway Safety Areas

No work within any TSA will be allowed during this project.

18.5.2. Adjustment of Taxiway Safety Areas

No TSA adjustments are anticipated as part of this project.

18.5.3. Required Distance for Blasting Operations

Blasting is not authorized on this project.

18.5.4. Requirements for Open Trench Procedures

No Construction will occur within any TSA or TOFA during this project.

Contractors shall close trenches located within active safety areas at the end of each workday. No open trenches or excavations will be allowed within 62-feet parallel to an active Taxiway centerline without prior coordination and approval from the Airport.

Additional requirements:

- Open trenches and spoils length not to exceed 500 feet in length at any one time.
- Spoils from excavations are to be placed on the runway/taxiway side that is closest to the trench.
- Spoil height is not to exceed 4 feet or any height that would cause a visual obstruction.
- Spoils not returned to the trench or removed from the worksite are to be properly marked with lighted barricades with a spacing of no more than 10 feet or as required to properly delineate the trench.

Furthermore, all grading and soil erosion control shall be addressed as identified in the construction documents.

18.5.5. Appropriate Covering of Excavations within TSA's

Hazards such as open trenches, major excavations, manholes, and steep embankments shall be barricaded, lighted, and outlined with appropriate caution tape or orange fabric construction fencing to prohibit accidental falls. The Contractor's site-specific and company safety plans/guidelines shall address the protection of these areas and the protection of the employees against these hazards. See Section 16 – *Hazard Marking and Lighting* or further information, and section 18.3.1 – *Requirements for Open Procedures* for requirements for appropriate covering or filling of excavations within an active TSA during operation of the adjacent Taxiway.

18.5.6. Marking of Excavations and Open Trenches

Hazards, such as open trenches, major excavations, manholes, and steep embankments shall be barricaded, lighted, and outlined with appropriate caution tape or orange fabric construction fencing to prohibit accidental falls. The Contractor's site-specific and company safety plans/guidelines shall address the protection of these areas and the protection of the employees against these hazards. See Section 16 – *Hazard Marking and Lighting* for further information.

18.5.7. Maintenance of TSA's

No Construction will occur within any TSA during this project.

18.6. Taxiway Object Free Area (TOFA)

No work within any TOFA will be allowed during this project.

Construction equipment not in use shall be returned to the Contractor's Staging Area by the Contractor, where practicable. In no case shall construction equipment be left within any TOFA.

18.7. Obstacle Free Zone (OFZ)

There will be no construction activity within the any OFZ during this project.

18.8. Runway Approach and Departure Surfaces

Construction activity shall be prohibited when equipment penetrates the imaginary surface for any open/operational runway as described in Title 14 CFR Part 77 and any restricted area as defined in the current edition of FAA AC 150/5300-13B, *Airport Design*, unless a favorable airspace finding has been made by the FAA and the equipment has been approved by the Airport.

Equipment that penetrates the Part 77 imaginary surfaces must display a red obstruction light during nighttime use and an orange and white checkered flag during the day. The Contractor will file a FAA **Form 7460-1, Notice of Proposed Construction or Alteration** for projects and equipment heights at different locations of the project, as required. Construction cannot begin until the FAA issues a Letter of Determination on the impacts on this project on the Airport and the National Airspace System. As such, the FAA's airspace analysis should be included in the Contractor's schedule.

19. OTHER LIMITATIONS ON CONSTRUCTION

19.1. General

Specific limitations on construction are included in but not limited to the following prohibitions and restrictions.

19.2. Prohibitions

19.2.1. Use of Tall Equipment

The use of tall equipment penetrating part 77 surfaces is not permitted unless a FAA airspace evaluation is completed for such equipment and the Contractor complies with the FAA's airspace determination letter. The approximate vertical height above the runway centerline elevation allowed per the Part 77 surfaces are shown in **Appendix CSPP-A – Construction Phasing and Access Plan**.

19.2.2. Use of Open Flame Welding/Torches

The Contractor will need to coordinate with Airport Operations prior to the use of open flame welding or torches to ensure fire safety precautions are in place and that the Airport has approved their use.

19.2.3. Use of Electrical Blasting Caps

The use of electrical blasting caps is not permitted on the Airport property.

19.3. Restrictions

19.3.1. Airfield Lighting Vault Lockout/Tagout Policy

The Contractor shall conduct all electrical work in compliance with industry standards for electrical safety and Lockout/Tagout (LOTO) procedures, including standards in the Occupational Safety and Health Administration's *Control of Hazardous Energy (Lockout/Tagout)*, contained in 29 CFR 1910.147. LOTO procedures shall be coordinated between Electrical Contractors, subcontractors, and Airport staff.

19.3.2. Contractor Employee Safety

The Contractor and its employees shall employ safe practices per the Contractor's safety procedures and industry safety standards. The Contractor's safety procedures will ultimately dictate the use of protective clothing and equipment for its employees, but at a minimum, the Contractor's employees must be equipped with a Type 2 safety vest, and every employee that enters the site must be wearing said vest. The vest must be worn the entire time that the employee is within the AOA. Reasonable precautions will be taken to protect contractor employees and equipment from jet blast, including construction materials launched by jet blast.

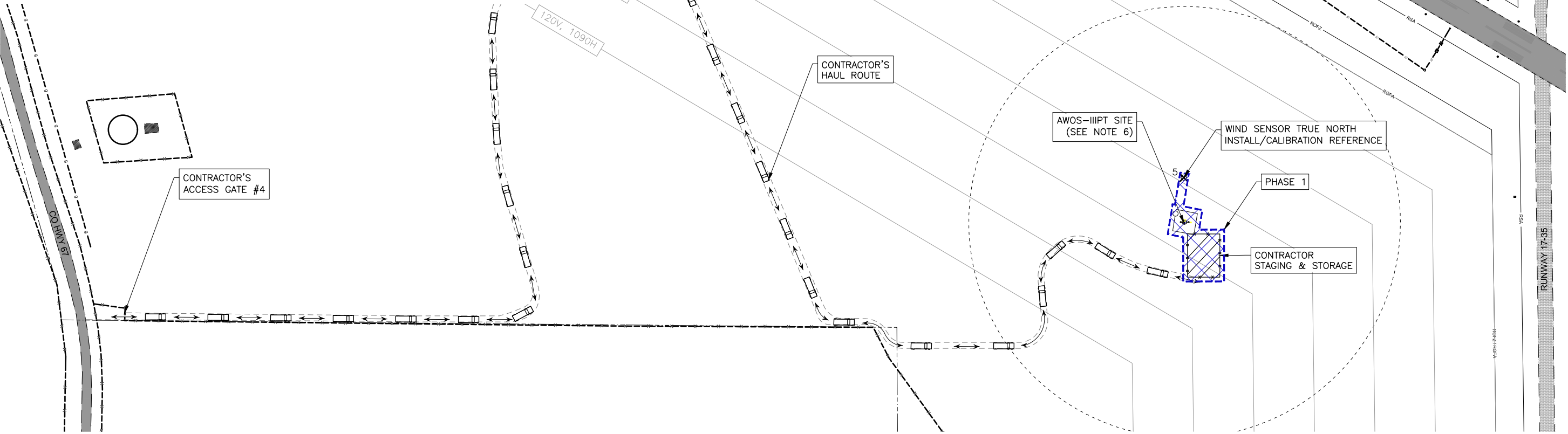
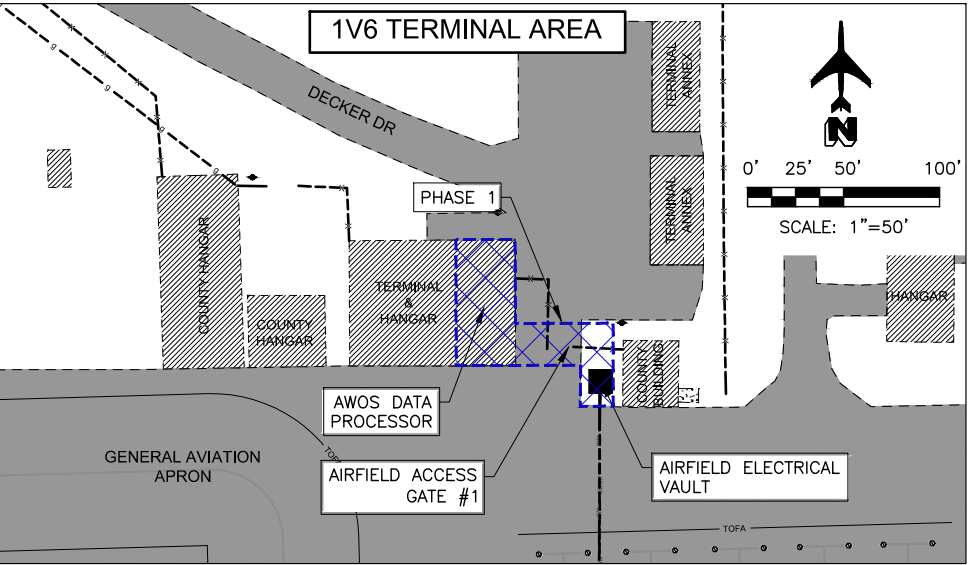


APPENDIX CSPP-A – CONSTRUCTION PHASING AND ACCESS PLAN



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LEGEND	
	CONTRACTOR'S ACCESS/HAUL ROUTE
	CONTRACTOR'S STAGING & STORAGE AREA
	PHASE 1 - LIMITS OF CONSTRUCTION
	RSA - RUNWAY SAFETY AREA
	TSA - TAXIWAY SAFETY AREA
	ROFA - RUNWAY OBJECT FREE AREA (ROFA)
	TOFA - TAXIWAY OBJECT FREE AREA (TOFA)
	OFZ - OBSTACLE FREE ZONE (OFZ)

PHASING SUMMARY	
ADMINISTRATIVE MOBILIZATION AN ADMINISTRATIVE NTP WILL BE ISSUED TO ALLOW FOR PROCUREMENT AND DELIVERY OF ALL NECESSARY MATERIALS AND COMPONENTS FOR THE INSTALLATION OF THE NEW AWOS-IIIPT.	PHASE DURATION 3 MONTHS (APPROX.) (NON-CONTRACT TIME)
PHASE 1 REMOVE EXISTING AWOS, TOWER, AND FOUNDATIONS, INSTALL NEW AWOS-IIIPT FOUNDATIONS, TOWER, CONDUIT AND CONDUCTOR, AND PREPARATION FOR NEW AWOS-IIIPT INSTALLATION.	30 CALENDAR DAYS
POTENTIAL STOP PERIOD SCHEDULING OF FAA COMMISSIONING INSPECTION IS DEPENDENT ON INSPECTOR AVAILABILITY.	TBD
PHASE 2 NEW AWOS-IIIPT COMPONENT/SENSOR INSTALLATION, CONNECTION, AND TESTING.	5 CALENDAR DAYS
PHASE 3 (COMMISSIONING) PUNCHLIST RECONCILIATION	2 CALENDAR DAYS (CONCURRENT WITH PHASE 2)
SUBSTANTIAL COMPLETION	35 CALENDAR DAYS
PUNCHLIST RECONCILIATION	7 CALENDAR DAYS
FINAL COMPLETION:	42 CALENDAR DAYS

- PHASING NOTES**
1. THE CONTRACTOR STAGING & STORAGE AREA SHALL BE APPROXIMATELY 100' X 75', CONFIRM WITH AIRPORT ONSITE.
 2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF HIS OWN EQUIPMENT. CONTRACTOR MAY INSTALL TEMPORARY FENCING AROUND THE CONTRACTOR STAGING & STORAGE AREAS AS SHOWN ON THIS SHEET AT HIS OWN EXPENSE. (NPI)
 3. CONTRACTOR SHALL PROTECT ALL HAUL ROAD ACCESS POINTS TO THE AIRFIELD FROM UNAUTHORIZED ENTRY. CONTRACTOR IS REQUIRED TO POST GATE GUARD(S) AT AIRFIELD ACCESS GATES DURING CONTRACTOR WORKING HOURS (IF LEFT UNLOCKED OR OPEN).
 4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INCIDENTAL GRADING & INFRASTRUCTURE NECESSARY FOR THE TEMPORARY HAUL ROUTES. ANY DISTURBED AREA SHALL BE RETURNED TO A CONDITION THAT IS EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION, TO THE SATISFACTION OF THE AIRPORT.
 5. THE HAUL ROUTE WITHIN THE AIRPORT PROPERTY IS SUBJECT TO CHANGE, AT THE AIRPORT'S DISCRETION, TO ACCOMMODATE AIRCRAFT MOVEMENTS.
 6. CONTRACTOR SHALL FIELD-VERIFY AWOS POWER SOURCE AND ISOLATE PRIOR TO CONSTRUCTION. ADVANCED COORDINATION WILL BE REQUIRED WITH THE AIRPORT TO ENSURE APPROPRIATE NOTAMS ARE ISSUED, AS NEEDED.

20V, 390H
(ABOVE RW CL ELEV.)

THE 14 CFR PART 77 PROMOTES SAFE, EFFICIENT USE, AND PRESERVATION OF NAVIGABLE AIRSPACE BY ESTABLISHING SEVERAL IMAGINARY SURFACES THAT ARE USED AS A GUIDE TO PROVIDE A SAFE AND UNOBSTRUCTED OPERATING ENVIRONMENT FOR AVIATION. THE CFR PART 77 CONTOURS SHOWN ARE FOR INFORMATION PURPOSES ONLY AND DEPICT THE MAXIMUM ALLOWABLE VERTICAL HEIGHT (IN FEET, LABEL V) OF CONSTRUCTION EQUIPMENT AND TERRAIN ABOVE THE RUNWAY CENTERLINE ELEVATION, AT A SPECIFIED HORIZONTAL DISTANCE FROM THE RUNWAY CENTERLINE (IN FEET, LABEL H). THE CONTRACTOR'S EQUIPMENT SHALL REMAIN BELOW ALL CFR PART 77 SURFACES AT ALL TIMES, UNLESS APPROVED OTHERWISE BY THE ENGINEER.

REV	DATE	DESCRIPTION

DIBBLE

2888 South Colorado Blvd. Suite 130
Denver, CO 80222
Phone: 303.353.4068
www.dibblecorp.com

REFERENCE ONLY
NOT FOR CONSTRUCTION
REFER TO SEALED CONSTRUCTION DRAWINGS

04.08.2025	MSS	MSS	JUC	FILE NAME: 25004-G2_X_PHAS
DATE:	DESIGNED BY:	DRAWN BY:	REVIEWED BY:	



FREMONT COUNTY AIRPORT
AWOS REPLACEMENT
CONSTRUCTION PHASING & ACCESS PLAN





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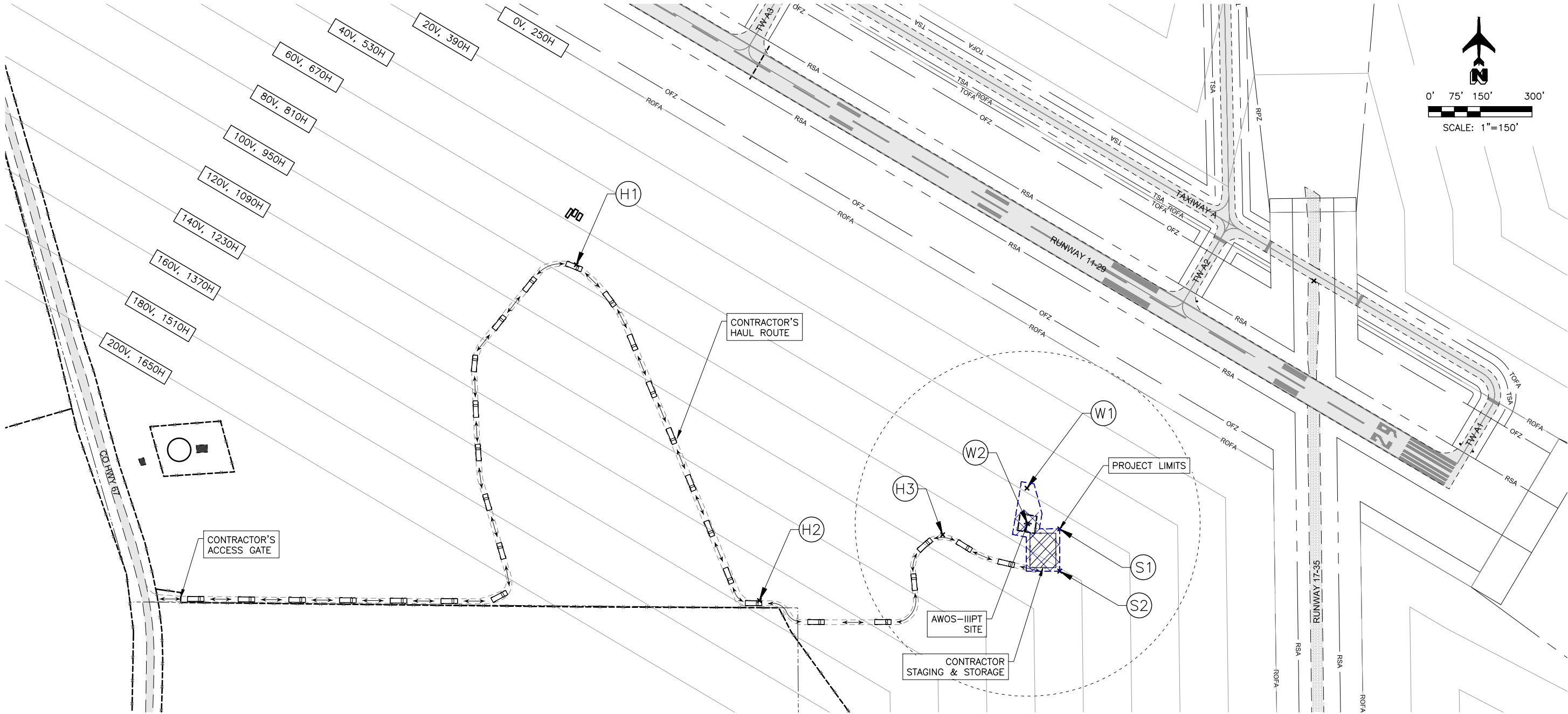


APPENDIX CSPP-B – DRAFT FAA FORM 7460-1 EXHIBIT



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LEGEND	
	CONTRACTOR'S ACCESS/HAUL ROUTE
	CONTRACTOR'S STAGING & STORAGE AREA
	PROJECT AREA/LIMITS OF CONSTRUCTION
	RSA— RUNWAY SAFETY AREA
	TSA— TAXIWAY SAFETY AREA
	ROFA— RUNWAY OBJECT FREE AREA (ROFA)
	TOFA— TAXIWAY OBJECT FREE AREA (TOFA)
	OFZ— OBSTACLE FREE ZONE (OFZ)

TEMPORARY CASE POINT TABLE					
ID	LATITUDE	LONGITUDE	GROUND ELEV MSL	EQUIP HEIGHT	DESCRIPTION
W1	N38° 25' 33.12"	W105° 06' 17.20"	5379	30' AGL	WORK SITE, NEW AWOS-IIIPT INSTALLATION, TOP OF EXIST GRADE.
W2	N38° 25' 32.09"	W105° 06' 17.18"	5376	60' AGL	WORK SITE, NEW AWOS-IIIPT TOWER INSTALLATION, TOP OF EXIST GRADE.
H1	N38° 25' 39.57"	W105° 06' 33.58"	5382	15' AGL	CONTRACTOR HAUL ROUTE, WEST SECTION, TOP OF EXIST PAVEMENT.
H2	N38° 25' 29.93"	W105° 06' 26.96"	5361	15' AGL	CONTRACTOR HAUL ROUTE, MIDDLE SECTION, TOP OF EXIST PAVEMENT.
H3	N38° 25' 31.79"	W105° 06' 20.28"	5370	15' AGL	CONTRACTOR HAUL ROUTE, EAST SECTION, TOP OF EXIST GRADE.
S1	N38° 25' 31.94"	W105° 06' 16.02"	5375	40' AGL	CONTRACTOR STAGING, NORTHEAST CORNER, TOP OF EXIST GRADE.
S2	N38° 25' 30.73"	W105° 06' 16.02"	5372	40' AGL	CONTRACTOR STAGING, SOUTHEAST CORNER, TOP OF EXIST GRADE.

- AIRSPACE STUDY NOTES
1. ELEVATIONS FOR TEMPORARY CASE POINTS ARE EXISTING SURFACE ELEVATIONS.

2. 7460-1 WITH PERMANENT CASE FOR NEW AWOS-IIIPT SUBMITTED VIA NON-FEDERAL PROGRAM MANAGER. ASN: 2025-ANM-6-NR.

20V, 390H
(ABOVE RW CL ELEV.)

THE 14 CFR PART 77 PROMOTES SAFE, EFFICIENT USE, AND PRESERVATION OF NAVIGABLE AIRSPACE BY ESTABLISHING SEVERAL IMAGINARY SURFACES THAT ARE USED AS A GUIDE TO PROVIDE A SAFE AND UNOBSTRUCTED OPERATING ENVIRONMENT FOR AVIATION. THE CFR PART 77 CONTOURS SHOWN ARE FOR INFORMATION PURPOSES ONLY AND DEPICT THE MAXIMUM ALLOWABLE VERTICAL HEIGHT (IN FEET, LABEL V) OF CONSTRUCTION EQUIPMENT AND TERRAIN ABOVE THE RUNWAY CENTERLINE ELEVATION, AT A SPECIFIED HORIZONTAL DISTANCE FROM THE RUNWAY CENTERLINE (IN FEET, LABEL H). THE CONTRACTOR'S EQUIPMENT SHALL REMAIN BELOW ALL CFR PART 77 SURFACES AT ALL TIMES, UNLESS APPROVED OTHERWISE BY THE ENGINEER.

DATE: 04.08.2025

DESIGNED BY: KDD

DRAWN BY: KDD

REVIEWED BY: KLS, MJB

FILE NAME: 1325004-1V6-AWOS-7460-1

REFERENCE ONLY

NOT FOR CONSTRUCTION

REFER TO SEALED CONSTRUCTION DRAWINGS

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1V6

FREMONT COUNTY AIRPORT

1V6 AWOS REPLACEMENT

FAA FORM 7460-1 EXHIBIT

7460-1

SHEET #

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