

MANSFIELD MUNICIPAL AIRPORT MANSFIELD, MASSACHUSETTS

RECONSTRUCT, MARK, LIGHT, AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPI, AND PRIMARY WIND CONE)

AIP NO. 3-25-0028-0XX-2025

PREPARED FOR:

**Mansfield Airport Commission
Mansfield, Massachusetts**

MAY 2025

PREPARED BY:



**Gale Associates, Inc.
6 Bedford Farms Drive, Suite 101
Bedford, New Hampshire**

JN 777141



A handwritten signature in black ink, appearing to read "M. Ottariano", positioned below the professional seal.

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INVITATION TO BID**MANSFIELD MUNICIPAL AIRPORT**

**RECONSTRUCT, MARK, LIGHT, AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT),
PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND
'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS
(REILS, PAPI, AND PRIMARY WIND CONE)**

AIP NO. 3-25-0028-0XX-2025

Sealed Bids for airport improvements at the Mansfield Municipal Airport, shall be submitted in accordance with the procedures outlined herein via the online bid hosting site listed below, on or before **June 25, 2025 at 11:00 A.M.** local time, at which time the bidding period closes, and the bid results will be automatically generated and distributed to all parties. Bids submitted after this time will not be accepted. Hard copies will not be accepted by Projectdog, Inc. or by the Mansfield Airport Commission. Tutorials and Instructions for the electronic bidding are available at www.Projectdog.com.

This project is for the reconstruction of Runway 14-32, parallel Taxiway 'A', and stub taxiways 'A1', 'A2', 'A3', and 'D'. The work includes the removal of existing pavement, runway and taxiway lights, cabling, ducts, drainage pipe, and the installation of a new full box section for airport pavements, runway and taxiway lights, runway end identifier lights (REILs), a new precision approach path indicator (PAPI) on the Runway 14 end, the relocation of the Airport's existing PAPI on the Runway 32 end, cabling, ducts, drainage structures and pipes, infiltration trenches, erosion and sedimentation controls, the installation of a new electrical vault and other work as shown on the Plans, as specified in the Specifications, and as directed by the Engineer.

Bids will be received for a single prime Contract. Bids shall be on a unit price basis, as indicated in the Bid Form.

The Contract time for completion is Ninety (90) calendar days. For additional information and requirements refer to the Plans and Specifications.

The construction of this project will require funding assistance from the Federal Aviation Administration (FAA) and the Massachusetts Department of Transportation (MassDOT) – Aeronautics Division. Funding assistance for the project is anticipated during Federal Fiscal Year 2025 (FY-2025), which begins October 1, 2024 through September 30, 2025. All funding assistance is contingent upon the availability of funds and receipt of funding assistance grants. FY-2025 funding may be available as late as September 30, 2025.

Plans and Specifications for the project may be examined on or after **May 28, 2025**. Electronic (PDF) or paper copies of the above Plans and Specifications may be obtained from Projectdog, Inc. Please visit www.projectdog.com and click "Sign Up" for free, or login with your existing account. Enter Project Code **869043** in the project locator box. Select "Acquire Documents" to download documents, review a hard copy at Projectdog's physical location, or request a free project CD. Questions regarding the website or bid document distribution should be directed to Projectdog, Inc. (Telephone: 978-499-9014).

Addenda and other additional or revised Contract Documents will be in the form of written addenda to the Plans and Specifications which, if issued, will be posted to the Projectdog, Inc. website, with

an email notification to all prospective Bidders at the respective e-mail addresses furnished to Projectdog, Inc. for such purposes, not later than three (3) calendar days prior to the date fixed for the opening of Bids. Failure of any Bidder to receive any such addendum or interpretation shall not relieve such Bidder from any obligation under his/her Bid as submitted. All addenda so issued shall become part of the Contract Documents.

Contractor shall comply with the below listed Federal Aviation Administration (FAA) Required Contract Provisions as contained within the project Specifications and Bid Documents; see Contract Provision Guidelines for Obligated Sponsors and Airport Improvement Program Projects.

- Title VI Solicitation Notice (Section A6.3.1)
- Title VI List of Pertinent Nondiscrimination Acts and Authorities (Section A6.4.1)
- Title VI Nondiscrimination Requirements/Title VI Clauses for Compliance (Section A6.4.2)

By submitting a Bid for this project, the Bidder certifies that the Bid is based on the payment of prevailing wages. This project contains both State and Federal Wage Rates under the Davis Bacon Act. In areas where specific wage rates conflict, the higher wage rate shall govern.

An optional Pre-bid video call will be held on **June 4, 2025 at 11:00 A.M.** Prospective Bidders shall call in using the web link provided by Gale Associates following notification of attendance. Please notify Danny Quirion, of Gale Associates, Inc. at dcq@gainc.com by end of day on **June 2, 2025** if you plan to attend. A link to join the meeting will be sent to the email address provided in the notification. Bidders are encouraged to perform a site visit prior to the pre-bid conference.

Bids shall be accompanied by Contractor/Subcontractor Certifications as specified in the Supplemental General Provisions and elsewhere in the Contract Documents. This requirement is mandatory and shall not be waived.

Bid security in the amount of at least five percent (5%) of the total Bid amount must be submitted with the Bid. The Bid security may be either a certified check drawn upon a bank within the Commonwealth of Massachusetts or a Proposal Guarantee Bond (Bid Bond) executed by a Surety company listed on the current United States Department of Treasury "Department of the Treasury's listing of approved Sureties (Department Circular 570)" as authorized to do business in the Commonwealth of Massachusetts. Bid Security shall be made payable to the Town of Mansfield. Bids submitted without acceptable security will not be considered.

The successful Bidder shall furnish:

- 100% Performance Bond
- 100% Payment Bond
- Liability Insurance listing Mansfield Municipal Airport, Town of Mansfield, Gale Associates, Inc., and Massachusetts DOT as additional insured
- Executed Owner/Contractor Agreement within five (5) calendar days from the date of the Notice of Award

The Mansfield Airport Commission reserves the right to reject any and all Bids, to waive any technical or legal deficiencies, and to accept any Bid that it may deem to be in the best interest of the Mansfield Airport Commission. No Bidder may withdraw his/her Bid for a period of one hundred eighty (180) calendar days following the bid opening.

DISADVANTAGED BUSINESS ENTERPRISE

The Mansfield Municipal Airport has an overall DBE goal of 6.06% for projects completed during fiscal years 2024-2026. The Contractor must comply with the requirements of 49 CFR Part 26 as part of this contract.

By:

Joel Brandwine
Chair
Mansfield Airport Commission
Mansfield, MA

END OF INVITATION

INFORMATION FOR BIDDERS

1. Access to Site to Inspect Existing Conditions Before Bidding

Access is to be obtained by contacting the Mansfield Municipal Airport directly. If a bidder would like to schedule a visit to the airport to view the project areas, please contact Mr. Kevin Bullock, Airport Manager – (508) 930-1121. The Contractor may examine the work site from the public streets at any time at their discretion. The Contractor is prohibited from going on private property without the prior authorization of the Owner. Please note that contacting the Airport Manager will be for access to the work area only. The Airport Manager cannot give any information on the project and all questions or clarifications need to be directed to the Engineer for inclusion into an Addendum.

2. Preparation of Bids

Bids shall be submitted electronically at www.Projectdog.com. Bidders may upload (“Add File” or “Replace File”), review (“View File”), save, submit (“Submit my E-Bid”), or retract (“Retract my E-Bid”) their E-Bid at any time prior to the designated deadline. The server clock is displayed on the project’s E-Bidding page and is the time of record. Bidders must select “Submit my E-Bid” prior to the designated deadline to officially submit their E-Bid online. Once submitted, an E-Bid cannot be edited. To modify a submitted E-Bid, Bidders must retract their submission, make and save any changes, and then submit the updated E-Bid. Upon submitting or retracting their E-Bid, Bidders will receive a confirmation e-mail for informational purposes only. Bidders are encouraged to contact Projectdog if the email is not received.

The Bids must include the following forms as applicable:

- i) Bid Forms (pages B-1 through B-29)
- ii) Buy American Forms (pages BA-1 through BA-5)
- iii) Bid Bond Forms (pages BB-1 through BB-6)
- iv) Gale Form 1 – Certificate of Non-Segregated Facilities
- v) Gale Form 5 – Proposed Disadvantaged Business Enterprise (DBE) and Small Business Utilization
- vi) Gale Form 5a – Prime Contractor Reporting Information Form
- vii) Gale Form 9 – Bidders List Collection Form
- viii) Within 24 hours of bid submission: Gale Form 6 – Disadvantaged Business Enterprise (DBE)/Small Business (SB) Letter of Intent (One for each DBE Listed on Gale Form 5). This form may be submitted with the Bid package.

3. Bid Deposit

Bid security in the amount of at least five (5) percent of the total Bid amount must be submitted with the Bid. The Bid security may be either a certified check or a Proposal Guarantee Bond (Bid Bond) executed by a Surety company listed on the current United States Department of Treasury “Department of the Treasury’s listing of approved Sureties (Department Circular 570)” as authorized to do business in the State of Massachusetts. Bid Security shall be made payable to the Town of Mansfield. Bids submitted without acceptable security will not be considered. The Bid Deposit will be retained from the three lowest qualified Bidders until a Contract is executed.

4. Liquidated Damages for Failure to Enter into Contract

In the event that a successful Bidder should fail or refuse to execute and deliver the Contract and Bonds required within five (5) calendar days of the date of the Notice of Award, he/she shall forfeit to the Owner as liquidated damages their Bid Deposit.

5. Method of Bidding

The Bid Form, which follows, consists of items of work for which Bid unit prices are requested and items of work for which Bid lump sum prices are requested. Each Bid shall state a unit price for each unit price item and a lump sum price for each lump sum item. Each unit price shall be multiplied by the quantity of the particular item and the result stated as the total amount for the item. All such total amounts shall be added together with the sum of all lump sum prices and the grand total of the Bid when correctly calculated will be used in the comparison of Bids received.

The Bid Form must not be changed and must be submitted under the name of and with the correct business address of the Bidder.

6. Revenue Enforcement and Protection Act

Every Bid shall be accompanied by the Certificate of Tax Compliance and Non-Collusion contained on the prescribed form.

7. Qualification of Bidder

It shall be the responsibility of the Owner to determine if Bidders are “responsible” and “qualified” in accordance with Massachusetts Law and these Plans and Specifications.

The Owner may make other such investigations including those outlined in the General Provisions Section 20 paragraph 20-02 to determine if the Bidder is “responsible” and “qualified”. It is the responsibility of the Bidder to promptly furnish all such information and data for this purpose as listed herein or as requested by the Owner.

For a Bidder to be considered “responsible” and “qualified” they shall have, among other qualifications, at least five (5) years of continuous experience as the prime contractor on public works projects with a Contract amount over \$150,000.00 and a scope of work similar to the proposed work AND at least one (1) airport project with a similar scope of work successfully completed in the past six (6) years.

The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to indicate that such Bidder is responsible and eligible. If the awarding authority determines that the low Bidder is not responsible and eligible, the awarding authority shall reject the Bidder and evaluate the next low Bidder in accordance with this section.

8. Time of Completion and Liquidated Damages

Upon receipt of the Notice of Award and the execution of the Contract between the Contractor and Owner, the Contractor shall start the Shop Drawing process. Actual Contract time shall not start accruing until the day specified by the Notice to Proceed with Construction from the Owner.

The successful Bidder (Contractor) shall commence work within five (5) days of receipt of written Notice to Proceed with construction from the Owner, unless otherwise ordered in writing from the Owner. The Contract Time for Completion is Ninety (90) Calendar Days. The

Bidder agrees to pay as liquidated damages, the sums as specified in Specification 80-08 of the General Provisions.

9. Conditions of the Contract Area

Each Bidder must inform himself/herself of the conditions relating to the scope of work, project site conditions and employment of labor thereon. Failure to do so will not relieve the successful Bidder of their obligation to furnish all labor, materials and equipment necessary to carry out the provisions of the Contract work scope.

10. Addenda and Interpretations

No interpretation of the meaning of the Plans, Specifications or other Pre-bid Documents will be made to any Bidder verbally.

Every request for interpretations should be in writing to the Engineers, Gale Associates, Inc., 6 Bedford Farms Drive, Suite 101, Bedford, NH 03110 (Tel: 603-471-1887), or via email to dcq@gainc.com, and to be given consideration must be received at least seven (7) calendar days prior to the date fixed for the opening of Bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Specifications which, if issued, will be posted to the Projectdog, Inc. website, with an email notification to all prospective Bidders at the respective e-mail addresses furnished to Projectdog, Inc. for such purposes, not later than two (2) calendar days prior to the date fixed for the opening of Bids. Failure of any Bidder to receive any such addendum or interpretation shall not relieve such Bidder from any obligation under his/her Bid as submitted. All addenda so issued shall become part of the Contract Documents.

Prospective bidders are encouraged to add "admin@projectdog.com" and the "@projectdog.com" domain to their trusted senders list, to ensure receipt of all addenda notifications. Prospective bidders shall be responsible to monitor the Projectdog, Inc. website at www.projectdog.com for project updates and addenda.

11. Security for Faithful Performance (Bonds)

Simultaneously with his/her delivery of the executed Contract, the Contractor shall furnish Surety Bonds as security for faithful performance of this Contract and for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract. The Surety shall be a duly authorized Surety company satisfactory to the Owner, listed on the current United States Department of the Treasury "Department of Treasury's listing of approved Sureties (Department Circular 570)", and licensed to do business in the State of Massachusetts as a condition of acceptability.

Surety Bonds Required: 100% Performance Bond
 100% Payment Bond

12. Power-of-Attorney

Attorneys-in-fact who sign Bid Bonds or Contract Bonds must file with each Bond a certified and effectively dated copy of their power-of-attorney.

13. Notice of Special Conditions

Attention is particularly called to the General Contract Provisions, Supplemental General Provisions, and Item M-001 and Item M-002 of the Technical Specifications that deal with the following:

- a. Inspection and Testing of Materials
- b. Insurance Requirements
- c. Legal Relations and Responsibility to Public
- d. Control of Work
- e. Summary of Work
- f. Environmental Permits

14. Laws and Regulations

The Bidder's attention is directed to the fact that all applicable Federal laws, State laws, municipal by-laws and ordinances, and the rules and regulations of all authorities having jurisdiction over the construction of the work shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though written out in the Contract Documents in full.

15. Estimated Quantities and Bid Form

Estimated quantities for unit price items are approximate only, being given as a basis for the uniform comparison of Bids, and the Owner does not expressly nor by implication agree that the actual amount of work will correspond therewith. Bidders should not assume they will receive 100% of each bid item.

The Owner reserves the right, as a condition for awarding the Contract, to increase or diminish the amount of any classes or portion of the work or to omit construction in certain locations, as may be determined by the Owner.

The Bid Form, which follows, consists of items of work for which Bid unit prices are requested and/or items of work for which Bid lump sum prices are requested. Each Bid shall state a unit price for each unit price item and a lump sum price for each lump sum item (if applicable). Each unit price shall be multiplied by the quantity of the particular item and the result stated as the total amount for the item. All such total amounts shall be added together with the sum of all lump sum prices and the grand total of the Bid when correctly calculated will be used in the comparison of Bids received.

The Bid Form must not be changed and must be submitted under the name of and with the correct business address of the Bidder.

16. Award

This project shall be awarded to the lowest responsible and qualified Bidder on the basis of competitive Bids in accordance with the procedure set forth in the provisions of these Plans and Specifications, the Airport's wishes, and available funding.

In the event there is a discrepancy in the Bid Proposal between the prices written in words and written in figures, the prices written in words shall govern. No Bid will be considered which does not contain a price for every item tabulated in the Bid Form.

The Owner reserves the right to waive any informalities and to reject any or all Bids in accordance with Federal, State, and local law, if it is in the Owner's interest to do so.

The award of this Contract must receive approval from an agency of the Federal Government and the State of Massachusetts. Notice of Award will be given to the lowest responsible and eligible Bidder within thirty (30) calendar days of receiving Federal and State approval and receipt of all applicable grants.

The Owner reserves the right to interview the Contractors that submit the lowest two (2) responsive bids, to discuss the project and project requirements to ensure that project objectives are understood prior to any award of the Contract.

17. Obligation of Bidder

At the time of the opening of Bids each Bidder will be presumed to have inspected the site, and to have read and to be thoroughly familiar with the Plans and Contract Documents (including all addenda) as well as all statutes, by-laws and regulations affecting their Bid. The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation with respect to their Bid.

18. Disqualification of Bidders

More than one Proposal from an individual, firm, or partnership, a corporation or an association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one Proposal for the work will cause rejection of all Proposals in which the Bidder is interested. Any or all Proposals will be rejected if there is reason for believing that collusion exists among the Bidders and no participants in such collusion will be considered in future Proposals for the same work. Proposals in which prices are obviously unbalanced may be rejected. Proposals from Contractors that in the opinion of the Owner are not qualified to perform the work as specified in the Contract Documents will be disqualified.

19. Required Submissions with Bids

The documents listed in Section 2. Preparation of Bids are to be submitted with each Bid. Failure of a Bidder to make all required submissions may cause the Owner to consider the Bid unacceptable.

20. Nondiscrimination in Employment

Contracts for work under this Proposal will obligate the Contractors and Subcontractors to not discriminate in employment practices.

Bidders must, if requested or required herein, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the award of the Contract. Successful Bidders must, if requested or required herein, submit a list of all Subcontractors who will perform work on the project and written signed statements from authorized agents of the labor pools with which they will or may deal for employees on the work together with supporting information that said labor pools will affirmatively cooperate in or offer no hindrance to the recruitment, employment and equal treatment of employees seeking employment and performing work under the Contract, or a certification as to what efforts have been made to secure such statements when such agents or labor pools have failed or refused to furnish same prior to the award of the Contract. Successful Bidders must be prepared to comply in all respects with the Contract Provisions regarding non-discrimination.

21. Disadvantaged Business Enterprise (DBE)

Bidders are reminded to review the contract requirements relative to DBEs and Small Businesses as outlined in Section I and II of the Supplemental General Provisions, and in accordance with 49 CFR Part 26. All Contractors and Subcontractors are required to comply with the requirements of 49 CFR Part 26.

DBEs must be registered with the Massachusetts Supplier Diversity Office (SDO).

No Periodic Cost Estimates will be accepted from Contractors unless they are accompanied by one Gale Form 7, "Subcontractor / Supplier DBE and Small Business Project Expenditure Report" for each Subcontractor or Supplier approved for work on the project.

The Mansfield Municipal Airport has an overall DBE goal of 6.06% for projects completed during fiscal years 2024-2026. The Contractor must comply with the requirements of 49 CFR Part 26 as part of this contract.

22. Excise Taxes

Attention of the Contractor is called to the requirements of the State and local excise tax system on construction equipment to which they will be subject.

23. Massachusetts State Sales Tax

The Contractor will be provided with the Owner's Tax-Exempt Certificate Number for the purchase of material and equipment to be utilized specifically for this Project.

24. Preconstruction Conference

The Contractor shall not commence work until a conference has been held at which representatives of the Contractor, Engineer, and Owner are present. The Engineer will arrange the Pre-construction Conference.

25. Notice to Proceed

Notice to Proceed will be issued as soon thereafter as the successful Bidder has met all prerequisite requirements of the Contract Documents.

26. Registered to do Business

All Bidders shall be registered to do business within the State of Massachusetts. Registration can be obtained through the Corporations Division of the Office of the Secretary of the Commonwealth of Massachusetts, (617) 727-9640. The three (3) lowest Bidders shall provide proof of registration within 24 hours of the Bid Opening.

27. Payment of Prevailing Wages

This project contains Massachusetts Wage Rates and Federal Wage Rates. In areas where specific wage rates conflict, the higher wage rate shall govern. By submitting a Bid for this project, the Bidder certifies that the Bid is based on the payment of the required wages.

The wage determinations included in these specifications establish the minimum wage rates and fringe benefits which must be paid for the entire term of the contract. Wage determinations that are modified after the bid opening will not be applicable to the Contract. As always, in areas where specific wage rates conflict, the higher wage rate shall govern.

28. Buy American Preferences

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

A bidder or offeror must submit the appropriate Buy American certification with all bids or offers on AIP-funded projects. Bids or offers that are not accompanied by a completed Buy American certification must be rejected as nonresponsive.

In accepting AIP funding, grant recipients are certifying that they will not acquire (or permit any Contractor or Subcontractor) to use any steel or manufactured products produced outside the United States on any portion of the project for which funds are provided, unless otherwise approved by the FAA. Therefore, for all products supplied for this project, the prime Contractor must either:

1. Certify, in writing, that the product is wholly produced in the U.S. of U.S. materials, or
2. Request a waiver to use a non-U.S. produced product (It shall be the sole right of the Owner to determine whether or not to request a waiver on a particular piece of equipment), or
3. Certify that the product being supplied for the project is on the Nationwide Buy American Waivers Issued list.

This AIP-funded project includes funding from federal, state and local sources.

The Federal Contract Provisions section of the project Specifications provides additional documentation on Buy American requirements. All Bidders shall read and understand the Buy American requirements of AIP-funded projects prior to submitting their Bid.

The successful Bidder, their Subcontractors and all the Subcontractors below them will be required to deliver only steel and manufactured products wholly produced in the U.S. of U.S. materials, or products for which the Owner receives a Buy American waiver from the FAA, or products listed on the current Nationwide Buy American Waivers Issued list, available electronically at:

http://www.faa.gov/airports/aip/buy_american/

END OF INFORMATION FOR BIDDERS

BID DOCUMENTS

BID FORM**MANSFIELD MUNICIPAL AIRPORT**

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPIS, AND PRIMARY WIND CONE)

AIP NO. 3-25-0028-0XX-2025

Date: _____

To: Mansfield Airport Commission

- A. The undersigned (hereinafter called the Contractor) proposes to furnish all labor, equipment and materials required for **RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPIS, AND PRIMARY WIND CONE)** in accordance with the accompanying Plans and Specifications prepared by Gale Associates, Inc., of Bedford, New Hampshire, for the amounts listed below, subject to additions and deductions in accordance with the terms of the Specifications. It being understood that the Owner will be the sole judge as to acceptance of Bids and award of the Contract.

Bidder agrees to complete the work under this Contract within ninety (90) calendar days of award of the Bid.

- B. This Bid includes addenda:

<u>Number</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____

- C. Bidders agree to perform all of the work described in the Specifications, shown on the Plans and tabulated below for the following unit and lump sum prices.

It is understood that the quantities given in this Bid Form are approximate only and are given as a basis for comparison of Bids. The Owner does not expressly or by implication agree that the actual amount of work will approximately correspond herewith but reserves the right to increase or decrease the amount of any item of the work listed, and the unit prices quoted in the Bid shall apply without change to such variation in the quantity of each of the items, except as further clarified herein. The Owner further reserves the right to delete any item of work in whole or in part, in order to meet the available funding.

- D. Mobilization is limited to a maximum of ten percent (10%) of the total project cost. If the total cost of mobilization exceeds the ten percent (10%) maximum, the bid shall be adjusted to reflect the ten percent (10%) maximum. Mobilization is calculated as follows: (total cost minus mobilization) x (10%) = max amount for mobilization.
- E. Bid Security in the amount of at least five percent (5%) of the total Bid amount must be submitted with the Bid. The Bid Security may be either a certified check or a Proposal Guarantee Bond (Bid Bond) executed by a Surety company listed on the current United States Department of Treasury

"Department of the Treasury's listing of approved Sureties (Department Circular 570)" as authorized to do business in the State of Massachusetts. Bid Security shall be made payable to the Mansfield Airport Commission. Bids submitted without security will not be considered.

- F. An optional Pre-bid video call will be held on June 4, 2025, at 11:00 A.M. Prospective Bidders shall call in using the web link provided by Gale Associates following notification of attendance. Please notify Danny Quirion of Gale Associates, Inc. (dcq@gainc.com) by June 2, 2025, if you plan to attend. A link to join the meeting will be sent to the email address provided in the notification. Site visits should be scheduled by calling the Airport Manager, Kevin Bullock at (508) 930-1121.

**MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS**

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPIS, AND PRIMARY WIND CONE)

AIP NO. 3-25-0028-0XX-2025

SCHEDULE OF UNIT PRICES

BASE BID

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
M-001-1	$\frac{1}{\text{LS}}$	<u>As-Built Plans and Final Survey</u> for the per Lump Sum price of: _____ _____ dollars and _____ cents.				
M-001-2	$\frac{4}{\text{EA}}$	<u>Lighted Runway Closure Marker</u> for the unit price per Each of: _____ _____ dollars and _____ cents.				
M-001-3	$\frac{220}{\text{LF}}$	<u>Orange Construction Fence</u> for the unit price per Linear Foot of: _____ _____ dollars and _____ cents.				
C-100-1	$\frac{1}{\text{LS}}$	<u>Contractor Quality Control Program (CQCP)</u> for the Lump Sum price of: _____ _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
C-102-1	<u>7,900</u> LF	<u>Installation and Removal of Compost Filter Tube</u> for the unit price per Linear Foot of: _____ dollars and _____ cents.				
C-102-2	<u>1</u> LS	<u>Stormwater Pollution Prevention Plan (SWPPP)</u> for the Lump Sum price of: _____ dollars and _____ cents.				
C-105-1	<u>1</u> LS	<u>Mobilization</u> for the Lump Sum* price of: _____ dollars and _____ cents. <i>*Mobilization may not exceed 10% of the overall bid.</i>				
C-105-2	<u>1</u> LS	<u>Engineer/RPR Field Office and Equipment</u> for the Lump Sum price of: _____ dollars and _____ cents.				
P-101-1	<u>49,650</u> SY	<u>Pavement Removal</u> for the unit price per Square Yard of: _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
P-101-2	<u>60</u> SY	<u>Cold Milling</u> for the unit price per Square Yard of: _____ _____ dollars and _____ cents.				
P-101-3	<u>231</u> EA	<u>Removal of Buried Structures</u> for the unit price per Each of: _____ _____ dollars and _____ cents.				
P-101-4	<u>1,050</u> LF	<u>Removal of Pipes/Ducts</u> for the per Linear Foot price of: _____ _____ dollars and _____ cents.				
P-151-1	<u>0.20</u> AC	<u>Clearing and Grubbing</u> for the unit price per Acre of: _____ _____ dollars and _____ cents.				
P-152-1	<u>53,200</u> CY	<u>Unclassified Excavation</u> for the unit price per Cubic Yard of: _____ _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
P-154-1	<u>29,000</u> CY	<u>Subbase Course</u> for the unit price per Cubic Yard of: _____ _____ dollars and _____ cents.				
P-154-2	<u>52,850</u> SY	<u>Separation Geotextile</u> for the unit price per Square Yard of: _____ _____ dollars and _____ cents.				
P-209-1	<u>7,650</u> CY	<u>Crushed Aggregate Base Course</u> for the unit price per Cubic Yard of: _____ _____ dollars and _____ cents.				
P-401-1	<u>10,550</u> TON	<u>Asphalt Surface Course</u> for the unit price per Ton of: _____ _____ dollars and _____ cents.				
P-603-1	<u>3,100</u> GAL	<u>Emulsified Asphalt Tack Coat</u> for the unit price per Gallon of: _____ _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
P-605-1	<u>100</u> LF	<u>Joint Sealing Filler</u> for the unit price per Linear Foot of: _____ dollars and _____ cents.				
P-620-1	<u>1</u> LS	<u>Surface Preparation</u> for the Lump Sum price of: _____ dollars and _____ cents.				
P-620-2	<u>34,200</u> SF	<u>Markings</u> for the unit price per Square Foot of: _____ dollars and _____ cents.				
P-620-3	<u>22,000</u> SF	<u>Temporary Markings</u> for the unit price per Square Foot of: _____ dollars and _____ cents.				
P-620-4	<u>1,950</u> LB	<u>Reflective Media</u> for the unit price per Pound of: _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
D-701-1	<u>370</u> LF	<u>12 Inch Reinforced Concrete Pipe</u> for the unit price per Liner Foot of: _____ _____ dollars and _____ cents.				
D-701-2	<u>120</u> LF	<u>15 Inch Reinforced Concrete Pipe</u> for the unit price per Liner Foot of: _____ _____ dollars and _____ cents.				
D-705-1	<u>13,400</u> LF	<u>6 Inch Perforated HDPE Underdrain Pipe</u> for the unit price per Liner Foot of: _____ _____ dollars and _____ cents.				
D-705-2	<u>1,000</u> LF	<u>6 Inch Solid PVC Underdrain Pipe</u> for the unit price per Liner Foot of: _____ _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
D-705-3	<u>52</u> EA	<u>Underdrain Cleanout</u> for the unit price per Each of: _____ dollars and _____ cents.				
D-751-1	<u>4</u> EA	<u>Catch Basin</u> for the unit price per Each of: _____ dollars and _____ cents.				
D-751-2	<u>2</u> EA	<u>Adjust Existing Frame/Cover</u> for the unit price per Each of: _____ dollars and _____ cents.				
D-752-1	<u>2</u> EA	<u>Flared End Section</u> for the unit price per Each of: _____ dollars and _____ cents.				
D-752-2	<u>13,400</u> SF	<u>Subsurface Infiltration Trench</u> for the unit price per Square Foot of: _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
T-901-1	<u>103,300</u> SY	<u>Seeding</u> for the unit price per Square Yard of: _____ _____ dollars and _____ cents.				
T-905-1	<u>10,750</u> CY	<u>Topsoil (Respread)</u> for the unit price per Cubic Yard of: _____ _____ dollars and _____ cents.				
T-905-2	<u>750</u> CY	<u>Topsoil (Borrow)</u> for the unit price per Cubic Yard of: _____ _____ dollars and _____ cents.				
L-107-1	<u>1</u> EA	<u>Primary Wind Cone (Internally Lighted)</u> for the unit price per Each of: _____ _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
L-108-1	<u>24,350</u> LF	<u>#8 AWG, 5kV, L-824, Type C Cable</u> for the unit price per Linear Foot of: _____ dollars and _____ cents.				
L-108-2	<u>15,850</u> LF	<u>#6 AWG, Solid, Bare Copper Counterpoise Wire</u> for the unit price per Linear Foot of: _____ dollars and _____ cents.				
L-108-3	<u>5,050</u> LF	<u>#6 AWG, 600 V Insulated Stranded Copper Conductor</u> for the unit price per Linear Foot of: _____ dollars and _____ cents.				
L-108-4	<u>2,550</u> LF	<u>#6 AWG, 600 V Insulated Stranded Grounding Conductor</u> for the unit price per Linear Foot of: _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
L-108-5	<u>13,100</u> LF	<u>#8 AWG, 600 V Insulated Stranded Copper Conductor</u> for the unit price per Linear Foot of: _____ _____ dollars and _____ cents.				
L-108-6	<u>6,550</u> LF	<u>#8 AWG, 600 V Insulated Stranded Grounding Conductor</u> for the unit price per Linear Foot of: _____ _____ dollars and _____ cents.				
L-109-1	<u>1</u> LS	<u>Precast Electrical Vault and Foundation</u> for the Lump Sum price of: _____ _____ dollars and _____ cents.				
L-110-1	<u>16,500</u> LF	<u>2" 1-way Unencased Electrical Conduit</u> for the unit price per Linear Foot of: _____ _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
L-110-2	<u>320</u> LF	<u>2" 2-way Unencased Electrical Duct Bank</u> for the unit price per Linear Foot of: _____ _____ dollars and _____ cents.				
L-110-3	<u>150</u> LF	<u>2" 2-way Concrete Encased Electrical Duct Bank</u> for the unit price per Linear Foot of: _____ _____ dollars and _____ cents.				
L-110-4	<u>4,500</u> LF	<u>4" 2-way Unencased Electrical Duct Bank</u> for the unit price per Linear Foot of _____ _____ dollars and _____ cents.				
L-110-5	<u>2,050</u> LF	<u>4" 4-way Unencased Electrical Duct Bank</u> for the unit price per Linear Foot of _____ _____ dollars and _____ cents.				
L-110-6	<u>1,000</u> LF	<u>4" 4-way Concrete Encased Electrical Duct Bank</u> for the unit price per Linear Foot of _____ _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
L-115-1	<u>42</u> EA	<u>Electrical Handhole</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-115-2	<u>6</u> EA	<u>Electrical Junction Can</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-1	<u>30</u> EA	<u>Runway Edge Light (Base Mounted)</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-2	<u>1</u> EA	<u>Runway Edge Light (Stake Mounted)</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-3	<u>8</u> EA	<u>Runway End Light (Base Mounted)</u> for the unit price per Each of: _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
L-125-4	<u>16</u> EA	<u>Runway Threshold Light (Base Mounted)</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-5	<u>127</u> EA	<u>Taxiway Edge Light (Base Mounted)</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-6	<u>3</u> EA	<u>Taxiway Edge Light (Stake Mounted)</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-7	<u>6</u> EA	<u>Airfield Guidance Sign (1 Module)</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-8	<u>10</u> EA	<u>Airfield Guidance Sign (2 Module)</u> for the unit price per Each of: _____ dollars and _____ cents.				

ITEM NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
L-125-9	<u>13</u> EA	<u>Airfield Guidance Sign (3 Module)</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-10	<u>2</u> EA	<u>Remove and Reset Airfield Guidance Sign</u> for the unit price per Each of: _____ dollars and _____ cents.				
L-125-11	<u>1</u> LS	<u>Runway End Identifier Lights (14 and 32 Ends)</u> for the Lump Sum price of: _____ dollars and _____ cents.				
L-125-12	<u>1</u> LS	<u>Precision Approach Path Indicators (14 End)</u> for the Lump Sum price of: _____ dollars and _____ cents.				
L-125-13	<u>1</u> LS	<u>Remove and Relocate Precision Approach Path Indicators (32 End)</u> for the Lump Sum price of: _____ dollars and _____ cents.				

BASE BID SUMMARY

BASE BID: _____ Dollars
(written value)

and _____ Cents
(written value)

(\$ _____).
(numerical value)

The Owner reserves the right to delete any item of work in whole or in part, in order to meet the available funding.

Amounts are to be shown in both words and figures. In case of Discrepancy, the amount shown in words will govern. In the event there is a discrepancy between the unit prices and the total, the unit prices shall govern.

The above unit prices shall include all labor, materials, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all Bids and to waive any informalities in the Bidding.

No Bidder may withdraw his/her Bid for a period of one hundred eighty (180) days following the bid opening.

The undersigned further certifies under the penalties of perjury that this Bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

The undersigned agrees that if he/she is selected as the Contractor he/she will, within five (5) calendar days, after presentation thereof by the Owner, unless otherwise directed in writing by the Owner: execute a Contract in accordance with the terms of this General Bid; furnish a Performance Bond and Payment Bond, each of a Surety company qualified to do business under the laws of the State and satisfactory to the Owner, and each in the sum of 100% of the Contract amount, the premiums of which are to be paid by the Contractor and are included in the Contract amount; furnish insurance certificates as required by the Specifications; and return the documents to the Owner. In addition, the Contractor agrees that they will begin work within five (5) calendar days of receipt of a Notice to Proceed (electronic receipt shall be considered acceptable as "receipt" under this provision). Failure by the Contractor to comply fully with either of these provisions may result in the cancellation of the Grant that provides the funding for this project and make the Contractor liable for the full amount of the Grant (including design, administration and other costs) plus reasonable expenses by the Owner.

Bidder proposes to provide all labor and materials to complete the work, as specified in the Contract Documents, and as is reasonably expected due to the existing conditions and required construction.

The undersigned hereby certifies that they are able to furnish labor that can work in harmony with all other elements of labor employed, or to be employed on the work, and that he/she will comply fully with all Federal, State and Local laws and regulations applicable to contract awards.

The Bid Security attached in the sum of \$_____ is to become the property of the Owner, in the event the Contract and Bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner causes thereby.

Company Name

Address

Address

Name of Authorized Signature

Signature

Title

Date

(SEAL - if Bid is by a corporation)

**COMMONWEALTH OF MASSACHUSETTS
BIDDER'S CERTIFICATION REQUIREMENT**

The following certification statement is to be signed by the Bidder.

I hereby certify that I am a _____ (title of Officer
of the company) and duly authorized representative
of _____ (name of company), whose
address is _____ and that neither I nor
the above company I here represent has:

- a. Employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any company or person (other than bona fide employee working solely for me or the above company) to solicit or secure this Contract,
- b. Agreed, as an express or implied condition for obtaining this Contract to employ or retain the services of any company or person in connection with carrying out the Contract, or
- c. Paid, or agreed to pay, to any company, organization or person (other than a bona fide employee working solely for me or the above company) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the Contract;

I acknowledge that this certification is to be furnished to the Massachusetts Department of Transportation, Aeronautics Division in connection with this Contract involving participation of ASMP funds, and subject to applicable State and Federal laws, both criminal and civil.

Certificate of Tax Compliance: Pursuant to Massachusetts General Laws, Chapter 62C, Section 49A, I certify under the penalty of perjury that the following firm or corporation, to the best of my knowledge and belief, has filed all Massachusetts Tax Returns and paid all Massachusetts taxes required under law.

FEDERAL I.D. NO. _____

BIDDER'S NAME: _____

BY: _____

TITLE: _____

DATED: _____

**COMMONWEALTH OF MASSACHUSETTS
BIDDER'S CERTIFICATION FOR MGL 30, §.39S**

The following certification statement is to be signed by the Bidder. This certification is based on Massachusetts General Law Chapter 30, Section 39S and shall incorporate that law by reference including all changes, revisions, amendments, or deletions.

a. As used in this certification the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. Any person submitting a Bid for, or signing a Contract to work on, the construction, reconstruction, alteration, remodeling or repair of any public work by the commonwealth, or political subdivision thereof, or by any county, city, town, district, or housing authority, and estimated by the awarding authority to cost more than \$10,000, and any person submitting a Bid for, or signing a Contract to work on, the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency, estimated to cost more than \$10,000, does hereby certify, under penalties of perjury, as follows:

1. The undersigned is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work;
2. That all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and that we shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and

We hereby acknowledge that any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

We further acknowledge that the attorney general, or his or her designee, shall have the power to enforce this section including the power to institute and prosecute proceedings in the superior court to restrain the award of Contracts and the performance of Contracts in all cases where, after investigation of the facts, he or she has made a finding that the award or performance has resulted in violation, directly or indirectly, of MGL Chapter 30, Section 39S, Subsection (b), and he or she shall not be required to pay to the clerk of the court an entry fee in connection with the institution of the proceeding.

We further acknowledge that as the Bidder, it is our responsibility to ensure compliance with MGL Chapter 30, Section 39S by all our Subcontractors, suppliers, consultants, and others physically present at the construction site(s) and performing work that is the responsibility of the Contractor as specified herein or as defined in all applicable laws, statutes, or regulations.

BIDDER'S NAME: _____

BY (TYPE NAME AND TITLE): _____

SIGNATURE: _____

DATE: _____

CONTRACTOR'S QUALIFICATIONS AND CERTIFICATION

NOTE: This section is to be notarized.

The undersigned submits answers to the following questions to enable the Owner to judge his or her experience and ability in, and facilities for, the work proposed to be done.

1. The work, if awarded to you, will have the resident personal supervision of whom? State his or her special qualifications.

2. Describe equipment you propose to use. State whether you own or rent it.

(Insert additional sheets as necessary.)

3. How many years has your organization been in business as a Contractor under the name in which you propose to execute this Contract?

4. What projects has your present organization completed of character similar to that proposed? Give the information indicated by the following tabulation:

[illegible]

(Insert Additional Sheets as Necessary)

5. Has your present organization ever failed to complete any work awarded to it? If so, state when, where and why.

6. Give below, the name of one or more banks which have information that would enable them to advise regarding the financial ability of your company.

Name of Bank:	Address:	Telephone No.
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7. The names and residences of all persons and parties interested in this proposal as principals are as follows:

NOTE: In case of a corporation, give names of officers and directors; in case of a partnership, give names of all partners.

8. The undersigned also agrees that all work to be performed by Subcontractors is listed as follows (Include Laboratory for Quality Control Testing if Laboratory is specified in the Technical Specifications):

Description of Subcontract Work:	Name and Address of Subcontractor:
-------------------------------------	---------------------------------------

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Dated at _____ this
day of _____, 20__

Name of Bidder: _____

By: _____

Title: _____

State of _____

County of _____

Being duly sworn, deposes and says that he/she is

(Title)

of _____ and that the answers to the
(name of organization)

foregoing questions and statements contained therein are true and correct.

Sworn to before me this _____ day of
_____, 20__.

My commission expires: _____

Notary Public

CERTIFICATE AS TO CORPORATE PRINCIPAL

(IF A CORPORATION)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally came _____

to me known, who being by me duly sworn, did depose and say as follows:

That he/she resides at _____

and is the _____

of _____

the corporation described in and which executed the foregoing instrument; that he/she knows

the corporate seal of said corporation; that the seal affixed to the foregoing instrument is such

corporate seal and it was so affixed by order to the Board of Directors of said corporation; and that by

the like order he/she signed thereto his/her name and official designation.

Notary Public (Seal)

My Commission expires: _____

**PARTNERSHIP CERTIFICATE
FOR PROPOSAL**

(IF A PARTNERSHIP)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is a general partner in the firm of _____;

and that said firm consists of himself/herself and _____

_____, and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

Notary Public (Seal)

My commission expires:

**INDIVIDUAL CERTIFICATE
FOR PROPOSAL**

(IF AN INDIVIDUAL)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is the owner of the

firm _____;

and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

Notary Public (Seal)

My commission expires:

CERTIFICATE OF TAX COMPLIANCE

I certify, under penalties of perjury, that I, to my knowledge and belief, have filed all state tax returns and paid all state taxes required under law.

* Signature of Individual or
Corporate Name/Corporate Officer
(Mandatory)

Company Name

**Social Security Number (Voluntary) or
Federal Identification Number

*Approval of a contract or other agreement will not be granted unless this certification clause is signed by the applicant.

**Your Social Security Number may be furnished to the State of Massachusetts to determine whether or not you have met tax filing or tax payment obligations. Providers who fail to correct their non-filing or delinquency will not have a contract or other agreement issued, renewed, or extended.

RETURN THIS PAGE WITH BID

**CERTIFICATE OF NON-COLLUSION AND
CONTRACTOR CERTIFICATION OF GOOD FAITH**

The undersigned certifies under penalties of perjury that this Bid or Proposal is in all respects bona fide and fair and has been made and submitted in good faith without collusion or fraud with any other person. As used in this certification, the word "**person**" shall mean any natural person, joint venture, business, partnership, corporation, union, committee, club, organization, group of individuals, or other business or legal entity.

By: _____
Signature of Person Signing Bid or Proposal

Typed or Printed Name of Person Above

Name of Business

Date: _____

**MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS**

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPIS, AND PRIMARY WIND CONE)

BUY AMERICAN REQUIREMENTS

STEEL AND MANUFACTURER'S PRODUCTS

The Buy American Preference incorporates statutory requirements and policies outlined in the in 49 USC § 50101, Executive Order 14005, and Build America, Buy America (BABA).

Section 50101 of 49 USC requires that all steel and manufactured goods used on AIP projects be produced in the United States. This section also gives the FAA the ability to issue a waiver to a Sponsor to use non-domestic material on an AIP funded project subject to meeting certain conditions. A Sponsor may request that the FAA issue a waiver from the Buy American Preference requirements if the FAA finds that:

- 1) Applying the provision is not in the public interest;
- 2) The steel or manufactured goods are not available in sufficient quantity or quality in the United States;
- 3) The cost of components and subcomponents produced in the United States is more than 60 percent of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number (such as specific airport lighting equipment) are considered the equipment.
- 4) Applying this provision would increase the cost of the overall project by more than 25 percent.

Executive Order 14005 advances the Administration's priority to use terms and conditions of Federal financial assistance awards to maximize the use of goods, products, and materials produced in, and services offered in, the United States. The Order directs, to the extent appropriate and consistent with applicable law, agencies shall partner with the Hollings Manufacturing Extension Partnership (MEP) to conduct supplier scouting in order to identify American companies that are able to produce goods, products, and materials in the United States that meet Federal procurement needs, prior to consideration of using non-domestic products.

The Bipartisan Infrastructure Law, Build America, Buy America (BABA) Act strengthens Made in America Laws and bolsters America's industrial base, protects national security, and supports high-paying jobs. Under BABA, iron, steel and certain construction materials are required to be 100% produced in the United States.

Under the Bipartisan Infrastructure Law (Pub. L. No. 117-58) BABA three waivers are available for iron and steel, manufactured products, and construction materials when a Federal agency finds that:

- 1) Applying the domestic content procurement preference would be inconsistent with the public interest (a "public interest waiver");

- 2) Types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (a “nonavailability waiver”); or
- 3) The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent (an “unreasonable cost waiver”).

BABA defines construction materials, items that are or consists 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.

Items that consist of two or more of the aforementioned materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials. For example, a plastic framed sliding window should be treated as a manufactured product while plate glass should be treated as a construction material.

The Buy America Preference requirements flow down from the Sponsor to first tier contractors, who are responsible for ensuring that lower tier contractors and subcontractors are also in compliance.

Note: The Buy American Preference does not apply to temporary equipment a contractor uses as a tool of its trade and which does not remain as part of the project.

**MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS**

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPIS, AND PRIMARY WIND CONE)

**CERTIFICATE OF COMPLIANCE WITH FAA
BUY AMERICAN PREFERENCE
(CONSTRUCTION PROJECTS)**

Bidder's Certification

Page 1 of 3

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with its proposal. The bidder or offeror must indicate how it intends to comply with 49 USC § 50101, BABA and other related Made in America Laws, U.S. statutes, guidance, and FAA policies, by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e., 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 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 the FAA evidence that documents the source and origin of the iron, steel, and/or manufactured product.
- b) To faithfully comply with providing U.S. domestic products.
- c) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
- d) Certify that all construction materials used in the project are manufactured in the U.S.

☐ 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 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

**CERTIFICATE OF COMPLIANCE WITH FAA
BUY AMERICAN PREFERENCE**

(CONSTRUCTION PROJECTS)

Bidder's Certification

Page 2 of 3

Required Documentation

- 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 furnish U.S. domestic product for any waiver request that the FAA rejects.

Required Documentation

Type 2 Waiver (Nonavailability) - The iron, steel, manufactured goods or construction materials or manufactured goods 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 components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "facility/project." The required documentation for a Type 3 waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
- b) Listing of all manufactured products 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 and installation at project location.
- d) Percentage of non-domestic component and subcomponent cost as compared to total "facility" component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

**CERTIFICATE OF COMPLIANCE WITH FAA
BUY AMERICAN PREFERENCE**

(CONSTRUCTION PROJECTS)

Bidder's Certification

Page 3 of 3

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) A completed Content Percentage Worksheet and Final Assembly Questionnaire from
- b) At minimum two comparable equal bids and/or offers;
- 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

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, (Name of

Bidder)_____

and (Name of Surety)_____

as Surety, are hereby held and firmly bound unto the Owner, as Owner in the penal sum of

_____for the payment of which, well and truly

to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators,

successors and assigns. Signed, this _ day of _____, 20____.

The Condition of the above obligation is such that whereas the Principal has submitted to the Owner a certain Bid, attached hereto and hereby made a part hereof to enter into a Contract in writing.

NOW THEREFORE,

- a. If said Bid shall be rejected, or in the alternate,
- b. If said Bid shall be accepted and the Principal shall execute and deliver a Contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) for the Base Bid and shall furnish a bond for this faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation, as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligation of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
Principal

Surety

By _____

IMPORTANT - Surety companies must be authorized to transact business in the Commonwealth of Massachusetts.

TAX COMPLIANCE CERTIFICATION

The undersigned certifies under penalties of perjury that, to the best of their knowledge and belief, they are in compliance with all laws of the Commonwealth of Massachusetts relating to taxes.

By: _____
Signature of Person Signing Bid or Proposal

Typed or Printed Name of Person Above

Name of Business

BID BOND

CERTIFICATE AS TO CORPORATE PRINCIPAL

(IF A CORPORATION)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally came _____

to me known, who being by me duly sworn, did depose and say as follows:

That he/she resides at _____

and is the _____

of _____

the corporation described in and which executed the foregoing instrument; that he/she knows the corporate seal of said corporation; that the seal affixed to the foregoing instrument is such corporate seal and it was so affixed by order to the Board of Directors of said corporation; and that by the like order he/she signed thereto his/her name and official designation.

Notary Public (Seal)

My Commission expires: _____

BID BOND

**PARTNERSHIP CERTIFICATE
FOR PROPOSAL**

(IF A PARTNERSHIP)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is a general partner in the firm of _____;

and that said firm consists of himself /herself and _____

_____, and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

Notary Public (Seal)

My commission expires:

BID BOND
INDIVIDUAL CERTIFICATE
FOR PROPOSAL
(IF AN INDIVIDUAL)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is the owner of the

firm _____;

and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

Notary Public (Seal)

My commission expires:

CONTRACT DOCUMENTS

CONTRACT

THIS CONTRACT, made this _____ day of _____,

20__, by and between _____ Town of Mansfield
(Name of Owner)

hereinafter called "Owner" and _____

doing business as a corporation located in the City/Town of _____, County of _____, and

State of _____, hereinafter called the "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Owner, the Contractor hereby agrees with the Owner to commence and complete the construction described as follows:

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPI, AND PRIMARY WIND CONE)

AIP NO. 3-25-0028-0XX-2025

hereinafter called the "Project".

It is agreed that the quantities given in the "Schedule of Unit Prices" in the Contractor's Bid section of the Contract Documents will be used as the basis for determining the amount due under this Contract Agreement and for establishing the amount of the required Contract Performance Surety Bond, and Contract Payment Bond, and that the amount due under this Contract so determined is

\$_____ for award of the Base Bid.

The Owner shall have the right to increase or decrease the amount and extent of the work by giving reasonable notice in writing to the Contractor. The Owner will pay for the work performed and the materials furnished for any such increase and will calculate a proper reduction for any decrease in accordance with the unit prices specified in the "Schedule of Unit Prices" section of the Contractor's Bid.

The Contract Amount includes all extra work in connection therewith, under the terms as stated in the General Provisions and Supplementary General Provisions of the Contract; and at his/her (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Bid, the General Provisions and Supplemental General Provisions of the Contract, the plans which include all maps, plans, blueprints and other drawings and printed or written explanatory matter thereof, the specifications and Contract Documents therefore as prepared by Gale Associates, Inc., herein entitled the "Engineer", all of which are made a part hereof and collectively evidence and constitute the Contract.

The Contractor hereby agrees to commence work under this Contract within five (5) calendar days of the date of the written "Notice to Proceed" and to fully complete the project within ninety (90) calendar days for award of the Base Bid. The Contractor further agrees to pay as liquidated damages the sums as specified in the General Provisions Section 80-08 of these Specifications for each consecutive day thereafter, until the work is completed as hereinafter provided in Section 80-08 of the General Provisions.

Notwithstanding any other provision contained in this agreement, the Contractor agrees to make no monetary claim for delays, interferences, or hindrances of any kind in the performance of this Contract occasioned by any act or omission to act of the Owner or any of its Representatives and agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the work.

The Owner may terminate this Contract for cause by Written Notice to the Contractor. In the event of such termination, Contractor shall not be entitled to any further payment under this Contract from the date of receipt of said Notice.

The Owner shall have the right to terminate this Contract at any time for its convenience on ten (10) days' prior Written Notice to Contractor. If Contract is terminated by the Owner for convenience, the Owner shall pay Contractor for all work performed and all materials purchased prior to the receipt of such Notice.

The Owner agrees to pay the Contractor in current funds for the performance of the Contract, subject to additions and deductions as provided in the General Provisions and Supplemental General Provisions and to make payments on account thereof as provided in Article 90 of the General Provisions. The Contractor shall be responsible for paying all other taxes and tariffs of any sort related to the Work.

The parties to these presents have executed this Contract in five (5) counterparts, each of which shall be deemed an original.

IN WITNESS WHEREOF, the Town of Mansfield and the Mansfield Airport Commission have caused this Contract to be signed and sealed in their corporate name by its Airport Commission Chair, respectively, being duly authorized, and _____
has caused this Contract to be signed and sealed in its corporate name by _____, its _____, being duly authorized, the day and year first written above at the Town of Mansfield, Massachusetts.

OWNER: Town of Mansfield
By _____
Name Kevin J. Dumas
Title Town Manager

ATTEST:
By _____
Name _____
Title _____

Town of Mansfield Airport
Commission
By _____
Name Joel Brandwine
Title Airport Commission Chair

ATTEST:

By _____
Name _____
Title _____

CONTRACTOR: _____
By _____
Name _____
Title _____

ATTEST: _____
By _____
Name _____
Title _____

(SEAL)

I CERTIFY THAT FUNDS FOR THIS CONTRACT
HAVE BEEN ENCUMBERED AND ARE
AVAILABLE, SUBJECT TO GRANT FUNDING BY
FAA AND MASSDOT AERONAUTICS DIVISION

APPROVED AS TO FORM

By _____
Town Accountant

By _____
Town Legal Counsel

CONTRACT
CERTIFICATE AS TO CORPORATE PRINCIPAL
(IF A CORPORATION)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally came _____

to me known, who being by me duly sworn, did depose and say as follows:

That he/she resides at _____

and is the _____

of _____

the corporation described in and which executed the foregoing instrument; that he/she knows the corporate seal of said corporation; that the seal affixed to the foregoing instrument is such corporate seal and it was so affixed by order to the Board of Directors of said corporation; and that by the like order he/she signed thereto his/her name and official designation.

My Commission expires: _____

Notary Public (Seal)

CONTRACT
PARTNERSHIP CERTIFICATE
FOR PROPOSAL
(IF A PARTNERSHIP)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is a general partner in the firm of _____;

and that said firm consists of himself/herself and _____

_____, and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

My Commission expires: _____

Notary Public (Seal)

CONTRACT
INDIVIDUAL CERTIFICATE
FOR PROPOSAL
(IF AN INDIVIDUAL)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is the owner of the

firm _____;

and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

My Commission expires: _____

Notary Public (Seal)

CONTRACTOR'S GUARANTEE

WHEREAS _____
(Contractor)

of _____
(Address)

herein called "the Contractor" has completed construction of the following project:

Owner _____ Town of Mansfield

Address of Owner _____ 6 Park Row, Mansfield, MA 02048

Title of Project: _____
Reconstruct, Mark, Light and Sign Runway 14-32 (Approx. 3,501 LF X 75 FT),
Parallel Taxiway 'A' (Approx. 3,485 LF X 25 FT), and Stub Taxiways 'A1', 'A2',
'A3', and 'D' (Approx. 150 LF X 25 FT EA); Install New Electrical Vault; and
Install NAVAIDS (REILs, PAPIs, and Primary Wind Cone)

AIP No. 3-25-0028-0XX-2025

Location: _____ Mansfield Municipal Airport

Date of Completion _____

Date Guarantee Expires: _____

Whereas, at the inception of such work the Contractor agreed to guarantee the construction against faulty materials or workmanship for a limited period and subject to the conditions set forth:

Now, therefore, the Contractor hereby guarantees, subject to the conditions herein set forth, that during a period of one (1) year from the date of completion of said construction, they will, at their own cost and expense, following receipt of written notice, make or cause to be made such repairs to said construction resulting solely from faulty construction or defects in materials or workmanship applied by or through the Contractor as may be necessary to maintain the construction in defect-free condition.

This guarantee is made subject to the following conditions:

1. Specifically excluded from this guarantee is any and all damage caused by the following: lightning, windstorm greater than 110 mph, hailstorm or other acts of God, or fire. If the construction is damaged by reason of any of the foregoing, this guarantee shall thereupon become null and void for the balance of the guarantee period unless such damage is repaired by the Contractor at the expense of the party requesting such repairs.
2. This guarantee shall not be or become effective unless and until the Contractor has been paid in full for all their work.

3. This guarantee runs in favor of Owner only and is not transferable.
4. Additional Conditions: This Contractor Warranty is in Addition to all other legal and specified Warranties and Guarantees required on the project's Contract Documents for materials, systems and performance of the manufacturer or supplier.

In Witness Whereof, this instrument has been duly executed this

_____ day of _____, 20__

_____ Company Name

By: _____
Authorized Signature

(Seal)

Title: _____

NOTE: Form shall bear seal if Contractor is a Corporation.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, _____,
organized under the Laws of the State of _____,
and having a usual place of business in _____,
as Principal and _____,

organized under the Laws of the State of _____,
and having a usual place of business at _____,

as surety, are holden and stand firmly bound and obligated unto the Owner, as obligee, in the sum of

(\$ _____) Dollars, lawful money of the United States of America, to and for the true payment, whereof, we hereby bind ourselves, and each of us, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has, by means of a written Agreement dated _____ entered into a Contract with the same obligee, a copy of which Agreement is attached hereto and by reference made a part hereof.

NOW, the condition of this obligation is such

THAT, if the said principal, his/her heirs, administrators, successors, or assigns, shall well and truly keep and perform all the agreements, terms and conditions of said agreement on his/her part to be kept and performed, including the guarantee in the General Conditions, then this obligation shall be void - otherwise, it shall remain in full force and virtue.

AND, the said surety, for value received, hereby stipulates and agrees that no change in, or 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 affect his/her obligations on this bond and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms or change in total cost of the Contract or to the work or to the specifications and shall remain effective throughout the extended term and cover the total cost of performance.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this ____ day of _____, in the year Two Thousand Twenty-Five.

PRINCIPAL -

(Seal)

By _____

SURETY -

(Seal)

By _____

IMPORTANT - Attach herewith proof of Authority of Officers or agents to sign bonds.

PERFORMANCE BOND
CERTIFICATE AS TO CORPORATE PRINCIPAL
(IF A CORPORATION)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally came _____

to me known, who being by me duly sworn, did depose and say as follows:

That he/she resides at _____

and is the _____

of _____

the corporation described in and which executed the foregoing instrument; that he/she knows
the corporate seal of said corporation; that the seal affixed to the foregoing instrument is such
corporate seal and it was so affixed by order to the Board of Directors of said corporation; and that by
the like order he/she signed thereto his/her name and official designation.

My Commission expires: _____

Notary Public (Seal)

PERFORMANCE BOND
PARTNERSHIP CERTIFICATE
(IF A PARTNERSHIP)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is a general partner in the firm of _____;

and that said firm consists of himself/herself and _____

_____, and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

My Commission expires: _____

Notary Public (Seal)

PERFORMANCE BOND
INDIVIDUAL CERTIFICATE
(IF AN INDIVIDUAL)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is the owner of the

firm _____;

and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

My Commission expires: _____

Notary Public (Seal)

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, _____,
organized under the Laws of the State of _____,
and having a usual place of business in _____,
as Principal and _____,
organized under the Laws of the State of _____,
and having a usual place of business at _____,

as surety, are holden and stand firmly bound and obligated unto Owner as obligee, in the sum of

(\$ _____) Dollars, lawful money of the United States of America, to and for the true payment, whereof, we hereby bind ourselves, and each of us, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has, by means of a written Agreement dated _____ entered into a Contract with the same obligee, a copy of which Agreement is attached hereto and by reference made a part hereof.

NOW, the condition of this obligation is such

THAT, if the said principal, his/her heirs, administrators, successors, or assigns, shall pay for all labor performed or furnished, all materials, including materials so employed which is not incorporated in the construction or repair work and is not wholly or necessarily consumed or made so worthless as to lose its identity but only to the extent of its purchase price less its fair salvage value, and for the retail or hire of vehicles, power shovels, rollers, concrete mixers, tools and other appliances and equipment employed in the work, all persons who contract with the Principal for labor and materials, all insurance premiums on said work, and the use of all patent rights, used or employed in the carrying out of said Agreement, then this obligation shall be void - otherwise it shall remain in full force and virtue. The obligation shall be in accordance with the Massachusetts General Laws, Chapter 149, Section 29 and Chapter 30, Section 39A.

AND, the said surety, for value received, hereby stipulates and agrees that no change in, or 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 affect his/her obligations on this bond and it does hereby waive notice of any such change, extension of time, increase in cost, alteration or addition to the terms of the Contract or to the work or to be specifications and shall remain effective throughout the extended term and cover the total payments to be made under the Contract.

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

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, in the year Two Thousand Twenty-Five.

PRINCIPAL -

(Seal)

By _____

SURETY -

(Seal)

By _____

IMPORTANT - Attach herewith proof of Authority of Officers or agents to sign bonds.

PAYMENT BOND
CERTIFICATE AS TO CORPORATE PRINCIPAL
(IF A CORPORATION)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally came _____

to me known, who being by me duly sworn, did depose and say as follows:

That he/she resides at _____

and is the _____

of _____

the corporation described in and which executed the foregoing instrument; that he/she knows
the corporate seal of said corporation; that the seal affixed to the foregoing instrument is such
corporate seal and it was so affixed by order to the Board of Directors of said corporation; and that by
the like order he/she signed thereto his/her name and official designation.

My Commission expires: _____

Notary Public (Seal)

PAYMENT BOND
PARTNERSHIP CERTIFICATE
(IF A PARTNERSHIP)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is a general partner in the firm of _____;

and that said firm consists of himself/herself and _____

_____, and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

My Commission expires: _____

Notary Public (Seal)

PAYMENT BOND
INDIVIDUAL CERTIFICATE
(IF AN INDIVIDUAL)

State of _____)

County of _____)

On this _____ day of _____, 20__

before me personally appeared _____

known to me and known by me to be the person who executed the above instrument, who, being by me first duly sworn, did depose and say that he/she is the owner of the

firm _____;

and that he/she executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

My Commission expires: _____

Notary Public (Seal)

NOTICE OF AWARD

TO: _____

PROJECT DESCRIPTION

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPIS, AND PRIMARY WIND CONE)

AIP NO. 3-25-0028-0XX-2025

The Owner has considered the Bid submitted by you for the above described WORK in response to its Advertisement for Bids dated _____, 20__ and Information for Bidders.

You are hereby notified that your Bid has been accepted for the award of the Base Bid, (strike out non-applicable terms) in the amount of \$ _____.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S PERFORMANCE BOND, PAYMENT BOND and Certificates of Insurance within five (5) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within five (5) days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this _____ day of _____, 20__

By: Joel Brandwine

Title: Airport Commission Chair

ACCEPTANCE OF NOTICE

By _____ this _____ day of _____, 20__

By: _____ Title: _____

NOTICE TO PROCEED

DATE: _____

TO: _____ SUBJECT: Notice to Proceed

TITLED: RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF
X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB
TAXIWAYS 'A1', 'A2', 'A3' AND 'D' (APPROX. 150 LF X 25 FT EA); INSTALL NEW
ELECTRICAL VAULT; AND INSTALL NAVAIDS (REILS, PAPIS, AND PRIMARY
WIND CONE)
AIP NO. 3-25-0028-0XX-2025

You are hereby notified to commence WORK in accordance with the Agreement dated

_____, 20__ on or before _____, 20__, and you are to complete the
WORK within ninety (90) calendar days for Base Bid. The date of completion of all WORK is therefore
_____, 20__ (_____ from the time of Notice to Proceed).

Owner: _____

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

this the _____ day of _____, 20__.

By: _____
(Signature)

Title: _____



Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary & CEO
Denise Garcia, Acting Administrator



MassDOT Contract Approval

MassDOT Aeronautics Division Form AD8 (Last Modified: September 20, 2024)

Approval of the below contract is granted in accordance with Section 51K, Chapter 90, of the Massachusetts General Laws, as amended. Such approval in no way makes the Massachusetts Department of Transportation (MassDOT) a party to the contract, in no way interferes with the right of any party to the contract and may not be considered a commitment of the MassDOT to fund the contract, unless otherwise so authorized.

PROJECT NAME:	Runway 14-32 and Taxiway 'A' Reconstruction
PROJECT NUMBER:	3-25-0028-0XX-2025
PARTIES TO CONTRACT:	Town of Mansfield, Contractor TBD
CONTRACT AMOUNT:	TBD

Approved by and date:

Denise Garcia, Acting Administrator, or approved designee

GENERAL CONTRACT PROVISIONS

SECTION 10 DEFINITION OF TERMS

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

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.

Paragraph Number	Term	Definition
10-10	Bidder	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized 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	<p>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.</p> <p>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.</p>
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,

Paragraph Number	Term	Definition
		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.
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

Paragraph Number	Term	Definition
		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 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>

Paragraph Number	Term	Definition
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 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 the Town of Mansfield .
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.

Paragraph Number	Term	Definition
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 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.

Paragraph Number	Term	Definition
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.
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 construction safety and phasing plan (CSPP) 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

Paragraph Number	Term	Definition
		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 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 construction safety and phasing plan (CSPP) 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

Paragraph Number	Term	Definition
		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). Information pertaining to the advertisement of this project can be found in the **Invitation to Bid** and **Information for Bidders**.

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 a maximum of ten (10) percent of the total project cost.

An optional prebid conference will be held for 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. Prebid conference will be held at the date, time, and place as indicated in the **Invitation to Bid**.

20-04 ISSUANCE OF PROPOSAL FORMS. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

- a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.
- b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

- c. Documented record of Contractor default under previous contracts with the Owner.
- d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

20-06 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from their own examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 PREPARATION OF PROPOSAL. The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

20-08 RESPONSIVE AND RESPONSIBLE BIDDER. A responsive bid conforms to all significant terms and conditions contained in the Owner's invitation for bid. It is the Owner's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 IRREGULAR PROPOSALS. Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.
- f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 BID GUARANTEE. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner. Please see **Invitation to Bid** for more information.

20-11 DELIVERY OF PROPOSAL. Each proposal shall be delivered in accordance with the requirements contained in the **Invitation to Bid** and **Information to Bidders**.

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 in accordance with the requirements contained in the **Invitation to Bid** and **Information for Bidders** 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 be opened and automatically tabulated by the online bid hosting site and distributed to all bidders electronically at the time specified in the **Invitation to Bid**. Proposals that have been withdrawn or received after the time specified for opening bids shall be returned to the bidder "unopened".

20-14 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.
- b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

- c. If the bidder is considered to be in “default” for any reason specified in paragraph 20-04, Issuance of Proposal Forms, of this section.

20-15 DISCREPANCIES AND OMISSIONS. A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner’s Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner’s Engineer a written request for interpretation no later than seven (7) days prior to bid opening.

Any interpretation of the project bid documents by the Owner’s Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

END OF SECTION 20

SECTION 30 AWARD AND EXECUTION OF CONTRACT

30-01 CONSIDERATION OF PROPOSALS. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

- a. If the proposal is irregular as specified in Section 20, paragraph 20-09, Irregular Proposals.
- b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, Disqualification of Bidders.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 AWARD OF CONTRACT. The award of a contract, if it is to be awarded, shall be made within **one hundred eighty (180)** 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. The Owner's Engineer or RPR will act to facilitate the additional work requested by the Owner, but does not have the authority to authorize additional work. No additional work or quantities can be approved without a written approved change from the Owner.

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, through the Owner's Engineer or 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.

The Owner, through, 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. Refer to the Supplemental General Provisions and Technical Specification Item M-001.

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):

- a. Survey files shall be provided in AutoCAD Civil3D 2021 format or newer.

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

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. The Contractor shall provide dedicated space for the use of the engineer, RPR, and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity. See Item M-001 for more information.

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. Please note that any fees for permits or licenses will not be waived, and it's the responsibility of the Contractor to investigate the fee structure of the Town of Mansfield.

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: refer to the **General Notes** on the Contract Plans. 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 on sheet(s) S1.1 through S2.2 of the project plans.

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.

Please see Item M-001 of the Technical Specifications for any information related to project phasing.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, Partial Acceptance.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-14 CONTRACTOR'S RESPONSIBILITY FOR WORK. Until the RPR's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, Partial Acceptance, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of

the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS. As provided in paragraph 70-04, Restoration of Surfaces Disturbed by Others, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.

See Specification Section M-001 and the project plans for more information.

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.

70-15.1 FAA FACILITIES AND CABLE RUNS. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport Owner a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

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.

For additional information pertaining to environmental protection, see Specification Section M-001 and M-002.

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.

The Contractor shall not commence work under this Contract until he/she has obtained all the insurance required hereunder and such insurance has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence work on his/her Subcontract until all similar insurance required of the Subcontractor has been so obtained and approved. Approval of the insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder. All required insurance shall be maintained at or above the required limits for the duration of this Contract. All policies shall be issued by companies authorized to write that type of insurance under the laws and statutes of the State of Massachusetts.

- a. Worker's Compensation and Employer's Liability Insurance: The Contractor shall take out and maintain during the life of this Contract, the statutory Workmen's Compensation and Employer's Liability Insurance in accordance with M.G.L. c.149 section 34A and c.152, as amended, for all of his/her employees to be engaged in work on the project under this Contract, and in case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Workmen's Compensation and Employer's Liability Insurance for all of the latter's employees to be engaged in such work. The minimum coverage shall be as required by statute or as listed below, whichever is higher.

Worker's Compensation Coverage A – Provide Statutory Minimum

Employer's Liability Coverage B	\$ 500,000. each accident
	\$ 500,000. disease per employee
	\$ 500,000. disease policy

The Contractor shall provide Worker's Compensation coverage in the State of Massachusetts.

- b. Contractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall procure and shall maintain during the life of this Contract, Contractor's Public Liability Insurance, Contractor's Property Damage Insurance, and Vehicle Liability Insurance in the amounts herein specified. The minimum coverage shall be as required by statute or as listed below, whichever is higher.

Public Liability and Property Damage:

Bodily Injury	\$ 1,000,000 each occurrence
	\$ 2,000,000 aggregate
Property Damage	\$ 1,000,000 each occurrence
	\$ 2,000,000 aggregate
Products & Completed Operations	\$ 1,000,000 each occurrence
	\$ 2,000,000 aggregate
Personal & Advertising injury	\$ 1,000,000 each occurrence
	\$ 2,000,000 aggregate

Vehicle Liability:

Bodily Injury & Property Damage	\$ 1,000,000 each person
	\$ 1,000,000 each accident
Combined Single Limit	\$ 1,000,000

Umbrella Policy:

Umbrella Policy	\$ 3,000,000 each occurrence
	\$ 3,000,000 aggregate

Coverage shall include but not be limited to injuries, including accidental death, to any one person; and subject to the same limit for each person.

- c. Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall either (1) require each of his/her Subcontractors to procure and to maintain during the life of their Subcontract, Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance of the type and in the amounts specified above, or (2) insure the activities of his/her Subcontractors in their policy, specified in subparagraph (b) hereof.
- d. Fire and Extended Coverage Insurance: The Contractor shall procure and maintain during the life of this Contract fire and extended coverage insurance on all work in place and/or materials stored at the site in the amounts specified herein. The minimum coverage shall be as required by statute or as listed below, whichever is higher.
Fire & Extended Coverage Insurance - At least 80% of the Contract Amount
- e. Scope of Insurance and Special Hazards: The insurance required under subparagraph (b) and (c) hereof shall provide adequate protection for the Contractor and their Subcontractors, respectively, against damage claims which may arise from operations under this Contract, whether such operations be by the insured or by anyone directly or indirectly employed by them, and also against any of the special hazards which may be encountered in the performance of this Contract as enumerated in the Supplemental General Provisions.
- f. Insurance Certificates: The Contractor shall furnish the Owner at the time of executing the Contract, Certificates of Insurance showing clearly the types and amounts of insurance coverage, the operations covered, effective dates, and expiration dates for all of the required insurance coverage. Certificates of Insurance shall be endorsed essentially as follows: "None of the coverage indicated on the Certificate will be modified or canceled without ten days prior written notice to the Owner". The Certificates of Insurance shall clearly state all of the requirements specified in all these subparagraphs and shall state the month and year of the Contract. **All insurance policies and certificates shall list the Town of Mansfield, Mansfield Airport Commission, and Gale Associates, Inc. as the additional insured and MassDOT, Aeronautics Division as additional insured under General Liability Insurance.** Acceptance of the insurance certificates by the Owner shall not relieve or decrease the liability of the Contractor under the Contract.

The Contractor's and Subcontractor's Public Liability, Property Damage, Vehicle Liability, and Vehicle Property Damage insurance coverage shall provide adequate protection against the following special hazards:

- a. Damage or injury to aircraft or persons in aircraft operating on or near the project site, resulting from any operations under this Contract.
- b. Damage or injury resulting from the use, storage, handling or transportation of explosives in connection with the Contract work.

END OF SECTION 70

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 twenty-five (25%) 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 4 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 five (5) 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 ten (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 twenty-four (24) hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a weekly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

80-04 LIMITATION OF OPERATIONS. The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, Construction Safety and Phasing Plan (CSPP).

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

Please see Item M-001 of the Technical Specifications for any information regarding project phasing.

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
I	\$2,000	90 Calendar Days

The maximum construction time allowed for Schedule I will be the sum of the time allowed for individual schedules but not more than ninety (90) calendar days. Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract.

80-09 DEFAULT AND TERMINATION OF CONTRACT. The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the execution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 TERMINATION FOR NATIONAL EMERGENCIES. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 WORK AREA, STORAGE AREA AND SEQUENCE OF OPERATIONS. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

END OF SECTION 80

SECTION 90 MEASUREMENT AND PAYMENT

90-01 MEASUREMENT OF QUANTITIES. All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard 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 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

Term	Description
	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 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.
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.
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.</p> <p>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%</p>

Term	Description
	<p>of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.</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.</p> <p>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 Payment for Extra Work.</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 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.</p>

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, ten (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. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work. Light Emitting Diode emitting diode (LED) light fixtures with the exception of obstruction lighting, must be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.
- 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

SECTION II – SUPPLEMENTAL GENERAL PROVISIONS

1. Contract and Contract Documents

By submitting a bid for this project, the bidder agrees to comply with all applicable contract provisions of the Federal Aviation Administration and MassDOT Aeronautics Division, as well as any state or local regulations governing contract provisions for contracts using public funds.

Additionally, by signing the Contract Documents included herein the Contractor certifies that they will comply with all federal contract provisions, solicitation clauses, and contract clauses applicable to the proposed work.

2. Forms

Section VIII of these Specifications contains most of the forms required for use during the project and referenced throughout the Contract Documents. Most of the forms have been assigned unique form numbers to assist the Contractor in locating the correct form. After award of the Contract, the Prime Contractor may request electronic copies of some or all of the forms contained in Section VIII.

3. Shop Drawings

- a. Submittals shall include, but not be limited to: shop drawings; schedules; samples; and manufacturer's literature, as required by the Specifications or requested by the Engineer.

No work shall be fabricated, or materials or equipment purchased or installed until such time as the Submittals for all related items have been approved. Work performed without Submittal approval is at the Contractor's own risk and may not be accepted for payment.

- b. All submissions shall include a Gale Form SD-25 "CONTRACTOR SUBMITTAL FORM" as a cover sheet to the submittal information. For submittals generated from Subcontractors, two (2) submittal forms are required, one (1) Gale Form SD-25 from the Contractor and one (1) Gale Form SD-26 "SUBCONTRACTOR SUBMITTAL FORM" from the Subcontractor. Submittals received without the completed submittal form(s) will be returned to the Contractor as incomplete and not reviewed.

Contractor submittal forms SD-25 and SD-26 are provided in Section VIII - Forms.

- c. Submissions made directly by Subcontractors will not be accepted. All business concerning approval will be conducted through the Contractor.
- d. The Contractor shall submit shop drawings for the review of the Engineer in digital format (.doc, .pdf, etc.).
- e. Submissions shall be made sufficiently in advance of construction requirements to allow ample time for checking, resubmitting, and rechecking without causing delay in the work. Failure to submit shop drawings in a timely manner shall not be considered as a valid reason for a Contract time extension or a delay claim.
- f. Each Submission, including the Submissions of Subcontractors shall be checked by the Contractor for accuracy and compliance with the Contract Documents. The certification on the submittal form shall constitute evidence of such checking and coordination. Submissions without this certification will not be considered for review by the Engineer.

Submittal certification shall include one of the following:

1. Submitted "AS SPECIFIED" for the product
 2. Submitted "AS EQUAL" to the product specified
 3. Submitted "IN SUBSTITUTION" for the product specified
 4. "OTHER"
1. Submitted "AS SPECIFIED" shall mean the Contractor is certifying that the submittal item or system is of the same manufacturer and model number, or performance standard as specified. For these items, manufacturer's data sheets shall be attached to the Contractor submittal form.
 2. Submitted "AS EQUAL" to the product or system specified shall mean the Contractor is certifying the proposed submittal, although supplied by a manufacturer other than the one specified for the item meets or exceeds the physical requirements, specifications, quality, speed, reliability, and/or maintenance costs of the product specified, and is capable of being incorporated into the overall project without design revisions and will perform equally or better than the specified item. For these items, manufacturer's data sheets shall be attached to the Contractor submittal to demonstrate that the performance, durability and/or maintenance standards of the product are as specified.
 3. Submitted "IN SUBSTITUTION" to the product or system specified means the Contractor is proposing an item or system of different physical requirements, specifications, quality, reliability, and/or maintenance costs, than the product specified. For a submission "IN SUBSTITUTION " of the product or system specified the following information and procedure shall be followed to determine if the Owner's requirements will be satisfied:
 - Design the system to meet or exceed the operational requirements, physical requirements, specifications, quality, reliability, maintenance costs, and ease of operation of the specified system.
 - Submit full Specifications for the system and all components in the form of shop drawings for review by the Owner and the Engineer.
 - Submit a revised design for the system, stamped by a licensed Professional Engineer within the state in which the work is to be performed.
 - Submit revised details for any and all components of the proposed system that are different than those of the specified system. A licensed Professional Engineer within the state in which the work is to be performed shall stamp details.
 - Demonstrate the proposed system to the satisfaction of the Owner and Engineer.
 - Reimburse the Engineer at the rate of \$180.00 per hour for Project Managers and \$155.00 per hour for Project Engineers plus expenses for all time spent reviewing, discussing and otherwise being involved with the substitute system. The payment shall be made based on an estimate of the time required and shall be paid in advance of the review. If the estimated amount is exceeded, additional amounts must be provided by the Contractor for the review to continue. Upon completion of the review, a

summary invoice will be provided to the Contractor indicating the hours spent and amount billed. Any money not spent on the review will be returned to the Contractor.

- Provide a credit satisfactory to the Owner for any cost savings associated with the substitution. The Contractor should anticipate providing a credit equal to one-half of the cost differential between the specified system and the system proposed for substitution.

Acceptance of any alternate item or system will be at the sole discretion of the Owner. Upon acceptance or rejection of a system or component thereof, the Engineer shall provide a written response to the Contractor in the form of a shop drawing review.

4. Submitted Certified as "OTHER". The Contractor shall provide information to demonstrate the proposed item or system will satisfy the design intent and provide the Owner performance, reliability and maintenance ease over its anticipated service life that exceeds that of the specified product. The final determination of suitability shall be the sole responsibility of the Owner. If the submittal is determined by the Owner and Engineer to fall into categories 1 through 3, above, the Submittal will be returned to the Contractor for resubmission.

- g. The Contractor shall not be relieved of the responsibility for deviations from requirements of the Contract Documents by the Engineer's approval of the shop drawings, product data, samples or similar submittals unless the Contractor has specifically informed the Engineer in writing of such deviation(s) at the time of the submittal and the Owner has given explicit written approval to the specified deviation. The Contractor shall not be relieved of responsibility for errors or omissions in shop drawings, product data, samples or similar submittals by the Engineer's action.
- h. Shop drawings for pipe, fittings, and masonry items shall consist of certificates of conformance of affidavits from the manufacturer's signifying that all materials conform to the Specifications.
- i. The Contractor shall allow for sufficient time within the project schedule for shop drawing review and processing. Items requiring long lead times which impact the start or completion of the project shall be identified, brought to the Engineer's attention and noted on the shop drawing submission. Additional Contract time will not be provided for failure to submit shop drawings for approval in a timely manner.
- j. The Owner reserves the right to back-charge the Contractor for expenses incurred in reviewing and returning incomplete shop drawings. Expenses shall include the costs of the Engineer at the rate of \$180.00 per hour for Project Managers and \$155.00 per hour for Project Engineers plus expenses for the actual time incurred. The Contractor will be provided documentation of the expenses incurred. Contractor back charges will be deducted from payments due to the Contractor.

4. Subletting Work to Subcontractors and Suppliers

Any work or material supply that costs \$10,000 or more and is included in this project that the Prime Contractor wants to sublet to another firm must be approved by the Owner. Any Subcontractors or Suppliers that will be doing work or supplying material that is sublet and

approved by the Owner must have a signed contract with the Prime Contractor or a lower tier Subcontractor or Supplier before they may begin work or deliver material to the project site. The Owner reserves the right to reject the use of any Subcontractor or Supplier that they feel is not in the best interests of the Owner.

a. Subletting Work to Suppliers

Suppliers that the Contractor or a lower tier Subcontractor or Supplier plans to sublet work to must be approved by the Owner. The Prime Contractor must submit a package of information to the Owner through the Engineer at least 14 days prior to the date that the supplier will be supplying material to the project site.

The Supplier Sublet package shall include the following correctly filled out and executed forms:

- i. Gale Form 4 – “Transmittal Request for Consent to Sublet”;
- ii. Gale Form 3 - “Contractor Acknowledgement Certification (Subcontract and/or Supplier)”;
- iii. Gale Form 2 – “EEO Officer Notification and Program Compliance Certification”;
- iv. EEO Appointment Letter;
- v. EEO Policy Statement; and
- vi. Gale Form 1 – “Certificate of Non-Segregated Facilities”.

b. Subletting Work to Subcontractors

Subcontractors that the Contractor or a lower tier Subcontractor or Supplier plans to sublet work to must be approved by the Owner. The Prime Contractor must submit a package of information to the Owner through the Engineer at least 14 days prior to the date that the supplier will be supplying material to the project site.

The Subcontractor Sublet package shall include the following correctly filled out and executed forms:

- i. Gale Form 4 – “Transmittal Request for Consent to Sublet”;
- ii. Gale Form 3 - “Contractor Acknowledgement Certification (Subcontract and/or Supplier)”;
- iii. Gale Form 3a – “Annual Contractor Assurances – AIP Funded Contracts”;
- iv. Gale Form 2 – “EEO Officer Notification and Program Compliance Certification”;
- v. EEO Appointment Letter;
- vi. EEO Policy Statement; and
- vii. Gale Form 1 – “Certificate of Non-Segregated Facilities”.

Gale Form 3a must be resubmitted by the Prime Contractor and each Subcontractor annually by January 15th.

5. Materials, Services, and Facilities

- a. It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide at no cost to the Owner all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the work for the specified item.

- b. Any work to be performed after regular hours, on Sundays or on Legal Holidays, shall be performed without additional expense to the Owner.

6. Contractor's Title to Materials

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he /she has good title to all materials and supplies used by him/her in the work are free from all liens, claims or encumbrances.

In the event that a lien is filed on the Owner's land or facilities by a supplier or Subcontractor, the Contractor agrees to immediately arrange to have the lien removed at no additional expense to the Owner or the Engineer.

7. Lump Sum and Unit Prices

Only those items for which unit prices are shown in the Bid Form will be considered for separate payment. Compensation for all other work shall be included in the appropriate Contract items.

Quantities listed in the Bid Form are estimated for Bidding purposes only and do not necessarily represent the exact amount of work to be done. Payment for unit price items will be based on the unit prices specified or Bid and the actual amount of work performed.

The Owner makes no guaranty to the Contractor about the minimum value of work to be completed under this project and the Contractor waives all rights to claims based on anticipated work or anticipated profits.

8. "Or Equal" Clause

Whenever materials are identified on the Plans or in the Specifications by reference to manufacturer's or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and any material of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the materials so proposed are, in the opinion of the Engineer, of equal substance and function. Such materials shall not be purchased or installed by the Contractor without the Engineer's written approvals.

9. Representations of Contractor

The Contractor represents and warrants:

- a. that they are financially solvent and that they are experienced in and competent to perform the type of work or to furnish the plant, materials, supplies or equipment, to be so performed or furnished by him/her; and
- b. that they are familiar with all Federal, State, municipal, and department laws, ordinances, and regulations, which may in any way affect the work or those employed therein, including but not limited to, rulings or actions specifically relating to the work or to the project of which it is a part; and
- c. that such temporary and permanent work provided by the Contract Documents as is to be done by them can be satisfactorily constructed and used for the purpose for which it is intended, and that such construction will not injure any person or damage any property; and

- d. that they have carefully examined the Plans, Specifications, and site of the work, and that from their own investigations, they have satisfied themselves as to the nature and location of the work, the character, quality and quantity of equipment and other facilities needed for the performance of the work, the general and local conditions and all other materials which may in any way affect the work or its performance.

10. Protection of Work and Property - Emergency

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this Contract. The Contractor shall at all times safeguard and protect their own work and adjacent property from damage. The Contractor shall correct any such damage, loss or injury unless such is caused directly and solely by errors contained in the Contract or caused by the Owner, or the Owner's duly authorized representative.

In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Engineer, in a diligent manner. The Contractor shall notify the Engineer immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Engineer for approval.

The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Section 40 of the General Provisions.

Where the Contractor has not taken action but has notified the Engineer of any emergency threatening injury to persons or damage to the work or any adjoining property, they shall act as instructed or authorized by the Engineer.

11. Inspection by Owner and Public Agencies

The authorized representatives and agents of the Owner shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. Representatives of the Owner shall have access to the work wherever it is in preparation or progress and the Contractor shall provide facilities for such access and inspection.

12. Reports, Records and Data

The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data, as the Owner may request concerning work performed or to be performed under this Contract.

13. Subsurface Information

Subsurface information if provided on the Plans and/or within the Specifications is for the bidders/contractors use and reference. Neither the Owner nor the Engineer take responsibility regarding interpretations, assumptions or conclusions drawn from the test borings, test reports or other subsurface information provided.

If no subsurface information is provided on the plans or within the Specifications for the area in the immediate vicinity of the work, it shall be understood that it is the bidder/contractor's responsibility to perform subsurface investigation and to satisfy themselves as to the subsurface conditions prior to bidding.

The bidder/contractor may request access to the site to perform subsurface investigation work. The bidder/contractor shall be responsible for all costs incurred by the Airport as well as

the cost to perform the subsurface investigation. The bidder/contractor shall further be responsible for all restoration to the satisfaction of the Airport and restoration costs. Any request for site access shall be coordinated through the Engineer.

14. Subsurface Conditions Found Different

Should the Contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the Plans or indicated in the Specifications, and they were not readily discernable during the Contractor's pre-bid inspections, the Contractor shall immediately give notice to the Engineer of such conditions before they are disturbed. The Engineer will there upon promptly investigate the conditions, and if the Engineer finds that they materially differ from those shown on the Plans or indicated in the Specifications, they will make such changes in the Plans and/or Specifications as they may find necessary; any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in the General Provisions.

15. Contractor's and Subcontractor's Insurance

For Contractor's and Subcontractor's Insurance requirements, see Section 70-21 of the General Provisions.

16. Special Hazards

The Contractor's and Subcontractor's Public Liability, Property Damage, Vehicle Liability, and Vehicle Property Damage insurance coverage shall provide adequate protection against the following special hazards:

- a. Damage or injury to aircraft or persons in aircraft operating on or near the project site, resulting from any operations under this Contract.
- b. Damage or injury resulting from the use, storage, handling or transportation of explosives in connection with the Contract work.

17. Mutual Responsibility of Contractors

If, through acts of neglect or negligence on the part of the Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on work, the Contractor agrees to settle with such other Contractor or Subcontractor by agreement or arbitration if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor who shall indemnify and save harmless the Owner against any such claim.

18. Use of Premises and Removal of Debris

The Contractor expressly undertakes at his/her own expense:

- a. to take every precaution against injuries to persons or damage to property;
- b. to store their apparatus, materials, supplies, and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of their work or the work of any other Contractors;
- c. to place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;

- d. to clean up frequently all refuse, rubbish, scrap materials, and debris caused by their operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance and prevent damage to aircraft, vehicles, or facilities;
- e. before final payment, to remove all surplus material, false work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from their operations, and to put the site in a neat, orderly condition;
- f. to affect all cutting, fitting or patching of their work required to make the same conform to the Plans and Specifications and, except with the consent of the Engineer, not to cut or otherwise alter the work of any other Contractor.

19. General Guarantee

Neither the final certificate of payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year of the date of final acceptance of the work unless a longer period is specified. The Owner will give notice of observed defects with reasonable promptness. The Owner may retain 2% of the Contract sum for a period of 12 months from the date of final acceptance to cover obligations under this guarantee.

20. Notice and Service Thereof

Any notice to any Contractor from the Owner relative to any part of this Contract shall be in writing and considered delivered and the service thereof completed when said notice is posted, by certified or registered mail, to the said Contractor at their last given address, or delivered in person to said Contractor or his/her authorized representative on the work or received by the Contractor by any mutually agreed upon method of electronic transmission.

21. Pre-construction Conference

A Pre-construction Conference shall be held. The purpose of this conference is to go over the Contractor's proposed job organization, equipment, and preliminary work schedule and to review Specification requirements. The order of construction shall be discussed with the Owner and Engineer and shall meet with their approval. The Contractor, prior to starting work, shall submit to the Engineer a written description of the methods they plan to use in doing the work and a detailed construction schedule with expected dates of beginning and completion of the various parts of the work.

22. Job-Site Administration

a. Contract Documents

The Owner will furnish the Contractor without charge an electronic copy of the Contract Documents, including General Provisions, Supplemental General Provisions, Technical Specifications, and Plans. Additional copies requested by the Contractor shall be furnished at cost.

b. Plans and Specifications: Interpretations

If the Bidder or Contractor finds anything in the Plans or Specifications that appear incorrect, illegal, impossible to construct, or in conflict with other Plan or Specification

sections, the Bidder or Contractor shall immediately make the discrepancy know to the Owner through the Engineer. The notice shall be in writing and conform to the notice requirements in Sections 20 and 45. The Bidder or Contractor may not profit from any discrepancies in the Plans and Specifications that have been discovered by them and have not been promptly brought to the Owner's attention.

The Contractor shall keep at the site of the work one copy of the Plans and Specifications signed and identified by the Engineer, and shall at all times give the Engineer, and other representatives of the Owner access thereto. Anything shown on the Plans and not mentioned in the Specifications or stated in the Specifications and not shown on the Plans, shall have the same effect as if shown or mentioned respectively in both. In case of any conflict or inconsistency between the Plans and Specifications, the Plans shall govern. Any discrepancy, conflict or inconsistency in or between the Plans and Specifications shall be promptly submitted in writing by the Contractor to the Engineer whose decision thereon shall be conclusive.

- c. Any Contractor whose place of business is located outside of the boundary of the city or town where the airport is located and who does not maintain local headquarters 24 hours a day within that city or town must make satisfactory arrangements with the Owner for taking care of emergencies or complaints which may occur at night, over the weekend, or when the job is shut down. If they do not, the Owner may make arrangements and the cost will be charged to the Contractor. Before the final estimate is certified for payment, the Contractor shall make similar arrangements to cover the guarantee period.

23. Required Provisions Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion or correction.

24. Official Not to Benefit

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply Contract or any Subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part hereof. No officer, employee, architect, attorney, engineer, or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory, or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply Contract, Subcontract, insurance contract, or any other contract pertaining to the project. The Contractor acknowledges the provisions of the State Conflict of Interest Law (General Laws Chapter 268A), and this Contract expressly prohibits any activity which shall constitute a violation of that law.

25. Arbitration

Any controversy or claim arising out of or relating to this Contract, or the breach thereof, except for claims which have been waived by the acceptance of final payment, which cannot be resolved by mutual agreement, shall, at the discretion of the Owner, be settled by arbitration in accordance with the Construction Industry Arbitration Rules of American Arbitration, and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

The Contractor shall carry on the work and maintain the progress schedule during the arbitration proceedings, unless otherwise agreed by him/her and the Owner in writing.

26. Indemnification

- a. The Contractor shall indemnify and hold harmless the Owner and the Engineer and their agencies and employees from and against all claims, damages, losses and expenses, including but not limited to, attorney's fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether it is caused in part by a party indemnified hereunder.
- b. In any and all claims against the Owner or the Engineer or any of their agents or employees by an employee of the Contractor, any Subcontractor, and supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph shall not be limited in any way by a limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.
- c. The obligations of the Contractor under this paragraph shall not extend to the liability of the Engineer, their agents or employees arising out of (a) the preparation or approval of maps, Plans, opinions, reports, surveys, change orders, designs or Specifications or (b) the giving of or the failure to give directions or instructions by the Engineer, their agents or employees provided such giving or failure to give is the sole cause of injury or damage, or (c) any other error or omission in the performance of the Contract between the Engineer and the Owner.

27. Record "As Built" Plans

In addition to any other requirements in the Plans and Specifications pertaining to "As-Built" Plans and surveys:

- a. The Contractor shall, during the progress of the work, keep a master set of prints on the job site, on which he/she shall keep a careful and neat record of all deviations from the Contract Plans prepared by the Engineer which are made during the course of the work.
- b. Upon completion of the project, these "as built" prints shall be certified as to their correctness by the signature of the Contractor and turned over to the Engineer for use by him/her in the preparation of a permanent set of "As Built" Plans.

28. Summary of Work

The Contractor shall take no advantage of any error or omission in the Plans, or any discrepancy between the Plans and Specifications, and the Engineer will make such correction and interpretations as may be deemed necessary for the fulfillment of the Plans and Specifications as prepared by them, and their decisions shall be final.

29. Airport Operations and Safety Requirements During Construction

The Contractor's attention is directed to the FAA Advisory Circular (AC) 150/5370-2G, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION, dated December 13, 2017 as amended or superseded and the approved Construction Safety and Phasing Plan (CSPP).

30. Payment

Payment shall be made after inspection, approval and acceptance of the work and receipt of the Contractor's request for payment on Periodic Cost Estimate forms prepared by the Engineer. Measurement and payment shall be as described in Section 90 of the General Provisions and in the individual payment items.

The Contractor shall complete and deliver electronic copies of the request for payment, all DBE/MBE forms and all associated documentation and certified payrolls to the Engineer. Only one request for payment will be accepted for each thirty (30) day calendar period.

Certified payrolls shall be submitted in advance covering the payment period of a periodic request for payment from the Contractor.

31. Definitions

- a. Acceptance: All Contracts require proper acceptance of the described goods or services by the Owner. Proper acceptance shall be understood to include inspection of goods and certification of acceptable performance of services by Authorized Representative(s) of the Owner to ensure that the goods or services are complete and are as specified in the Contract.
- b. Contract Documents: All the documents making up the "Contract" as defined in the General Provisions and enumerated in the Table of Contents. The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper performance of the Contract. In the event there is a conflict between the Contract and the General Provisions or Supplemental General Provisions and the Bid Documents, the Bid Documents including any addenda issued relative thereto shall supersede and control.
- c. The Contractor: The "other party" to any Contract with the Owner. This term shall (as the sense and particular Contract so require) include, Vendor, Contractor, Engineer, or other label used to identify the other party in the particular Contract. Use of the term "Contractor" shall be understood to refer to any other such label used.
- d. Goods: Goods, Supplies or Materials.
- e. Subcontractor: Those having a direct Contract with the Contractor. The term includes one who furnished material worked to a special design according to the

Plans or Specifications of this work but does not include one who merely furnishes material not so worked.

- f. Work: The services or materials contracted for, or both.

32. Subject to Appropriation

Notwithstanding anything in the Contract Documents to the contrary, any and all payments which the Owner is required to make under this Contract, including any proposed change orders, shall be subject to appropriation or other availability of funds as certified by the Owner's Auditor. Owner may immediately terminate or suspend this Contract in the event that the appropriation(s) or funding for this Contract is eliminated or reduced to an amount which will be insufficient to support anticipated future obligations under this Contract. In the event of termination, the Contractor will be compensated for any work completed up to such date of termination.

33. Permits and Approvals

It is the Contractor's responsibility to secure, obtain and pay for any Permits, Licenses, Approvals and all other legal or administrative prerequisites to his/her performance of the Contract.

34. The Contractor's Breach and the Town's Remedies

- a. Failure of the Contractor to comply with any of the terms or conditions of this Contract shall be deemed a material breach of this Contract, and the Owner shall have all the rights and remedies provided in the Contract Documents, the right to cancel, terminate, cure or cover the breach and/or suspend the Contract in whole or in part, the right to maintain any and all actions at law or in equity or other proceedings with respect to a breach of the Contract including damages and specific performance, and the right to select one or more of the remedies available to him/her.
- b. Attorney's Fees: In the event that any dispute arises concerning this Contract or in the event of any claim, suit, action, proceeding, either judicial or administrative in nature, as a result of a default, delay, breach, wrongdoing, action or inaction of the Contractor, then the Contractor shall be liable for and shall pay for all reasonable costs, fees and expenses of the Owner including expenses for hiring experts and for attorney's fees at the rate of \$300.00 per hour. The obligations created herein arise regardless of whether an administrative proceeding, arbitration or litigation is commenced and shall include- consultation, advice or counsel sought from any attorney or expert in connection with any such default, delay, breach, wrongdoing, action or inaction of the Contractor.

35. Termination

The following shall constitute default or material breach of this Contract by the Contractor entitling the Owner to the remedies described in these specifications.

- a. any material misrepresentation made by the Contractor;
- b. any failure by the Contractor to perform any of his/her obligations under the Contract including but not limited to (i) failure to commence performance at the time specified or if not specified, in a reasonable time, (ii) failure to complete the Contract on time,

(iii) failure to perform the work in a manner to the reasonable satisfaction of the Owner, (iv) failure to re-perform, cure or correct performance services or delivery of goods which were rejected by the Owner, discontinuance of services, or (vi) violation of any provision of this Contract and in strict conformity with the Specifications.

The Owner may terminate this Contract in whole or in part when and if the Purchasing Agent determines that termination would be in the best interest of the Owner. The Purchasing Agent's determination shall be in writing and delivered to the Contractor. If the Contract is terminated under this section the Contractor shall be entitled to be paid for goods delivered, services rendered, and work completed in accordance with the Contract and accepted by the Owner before such termination.

36. Amendments/Modification

No officer, official or employee of the Owner shall have the power to amend, modify or alter this Contract or waive any of its provisions or to bind the Owner by making any promise or representation not contained herein except by an amendment, in writing, executed in the same manner as this Contract is executed. The Contractor may not rely on any conduct, statements, action, inaction or course of conduct of the employees or officers of the other party as having changed, modified, or amended this Contract, the Owner shall not be construed as waiving any provision of this Contract unless the waiver is executed in writing as an amendment to this Contract. No waiver by the Owner of any default or breach shall constitute a waiver of any subsequent default or breach. Forbearance or indulgence in any form or manner by the Owner shall not be construed as waiver nor shall it limit the legal or equitable remedies available to him/her.

37. Statutory Compliance

- a. Contract will be construed and governed by the provisions of applicable Federal, State and local laws and regulations; and whenever any provision of the Contract or Contract Documents shall conflict with any provision or requirement of Federal, State or local law or regulation, then the provisions of law and regulation shall control. Where applicable to the Contract, the provisions of the Massachusetts General Laws are incorporated by reference into this Contract, including but not limited to the following:

Chapter 30B (Procurement of Goods and Services); Chapter 30, Sections 39A through 39G, Section 39I, Section 39J, Sections 39L through 39P, Section 39R, Section 39S, and Section 40; and Chapter 149, Section 25, Section 26, Section 27, Section 27B, Section 27F, Section 29, Sections 29 A through 29C, Section 30, Section 34; Section 34A; Section 34B, Section 44J, and Section 129A.

- b. Whenever applicable law mandates the inclusion of any term and provision into a municipal Contract, this Section shall be understood to import such term as provision into this Contract. To whatever extent any provision of this Contract shall be inconsistent with any law or regulation limiting the power or liability of the Owner, such law or regulation shall control.
- c. The Contractor shall give all notices and comply with all laws and regulations bearing on the performance of the Contract. If the Contractor performs the Contract in violation of any applicable law or regulation, the Contractor shall bear all costs, damages and expenses arising therefrom.

- d. The Contractor shall keep himself or herself fully informed of all existing and future State and Federal laws and municipal by-laws and regulations and of all orders and decrees of any bodies or tribunals having jurisdiction in any manner affecting those engaged or employed in the work, of the material used in the work or in any way affecting the conduct of the work. If any discrepancy or inconsistency is discovered in the Plans, Specifications or Contract for this work in violation of any such law, by-law, regulations, order or decree, the Contractor shall forthwith report the same in writing to the Owner. He/she shall, at all times, himself/herself observe and comply with and shall cause all his/her agents, employees and Subcontractors to observe and comply with all such existing and future laws, bylaws, regulations, orders and decrees; and shall protect and indemnify the Owner, and his/her duly appointed agents against any Claim or liability arising from or based on any such law, bylaw, regulation or decree.

38. Conflict of Interest

Both the Owner and the Contractor acknowledge the applicability of the State Conflict of Interest Law (Massachusetts General Laws Chapter 268A) to the relationship(s) established by this Contract. This Contract expressly prohibits any activity that shall constitute a violation of that law. The Contractor shall be deemed to have investigated their applicability to the performance of this Contract; and by executing the Contract Documents, the Contractor certifies to the Owner that neither they nor their agents or Subcontractors are thereby in violation of Massachusetts General Laws Chapter 268A.

39. Certificate of Tax Compliance

This Contract must execute a certification of tax compliance as contained in the Bid Forms.

40. Discrimination

The Contractor will carry out the obligations of this Contract in full compliance with all of the requirements imposed by or pursuant to any executive orders, rules, regulations, or requirements of the United States of America, the State of Massachusetts, the Town of Mansfield, the Mansfield Airport Commission, or other body having jurisdiction, as they may from time to time be amended in relation to discrimination, equal opportunity employment, or related matters.

41. Assignment

Assignment of this Contract is prohibited, unless assignment is provided for expressly in the Contract Documents.

42. Condition of Enforceability Against the Town

This Contract is only binding upon, and enforceable against, the Owner if, (1) the Contract is signed by the Airport Commission; (2) endorsed with approval by the Owner's legal counsel as to form; and (3) it has been formed and executed in accordance with municipal ordinances and State laws.

43. Corporate Contractor

If the Contractor is a corporation, it shall endorse upon this Contract (or attach hereto) its Clerk's Certificate certifying the corporate capacity and authority of the party signing this Contract for the corporation. Such certificate shall be accompanied by a letter or other

instrument stating that such authority continues in full force and effect as of the date the Contract is executed by the Contractor. This Contract shall not be enforceable against the Owner unless and until the Contractor complies with this section. The Contractor and Subcontractors, if a foreign corporation, shall comply with the provisions of the Massachusetts General Laws Ch. 156A, Section 17, and any Amendments thereof, and said Contractor shall comply with all the laws of the State of Massachusetts.

44. Liability of Public Officials

To the full extent permitted by law, no official, employee, agent or representative of the Owner shall be individually or personally liable on any obligation of the Owner under this Contract.

45. Notice

Any notice permitted or required under the provisions of this Contract to be given or served by either of the parties hereto upon the other party hereto shall be in writing and signed in the name or on behalf of the party giving or serving the same. Notice shall be deemed to have been received at the time of actual service or three (3) business days after the date of a certified or registered mailing properly addressed. Notice to the Contractor shall be deemed sufficient only if sent to the address set forth in the Contract. Notice to the Owner shall be deemed sufficient only if sent to the following address:

Joel Brandwine, Chair
Mansfield Airport Commission
6 Park Row
Mansfield, MA 02048

46. Binding on Successors

This Contract shall be binding upon the Contractor, his/her assigns; transferees, and/or successors in interest (and where not to corporate, the heirs and estate of the Contractor).

47. OSHA Training

Massachusetts General Law (MGL), Chapter 30, Section 39S requires Bidders to certify his/her Bid for compliance to MGL, Chapter 30, Section 39S. This certification in part requires that all employees to be employed at the job site have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll reported for each employee.

The Contractor shall furnish documentation of successful completion of said course by either a copy of the OSHA card or a letter or certificate of completion from the person or company that administered the course. OSHA documentation shall be provided prior to any person beginning work on the site. It is recommended that contractors and subcontractors provide a copy of OSHA documentation for all employees prior to the start of work. Periodic Cost Estimates will not be accepted for payment unless all OSHA documentation has been received.

48. Complete Contract

This instrument, together with its endorsed supplements, and the other components of the Contract Documents, constitutes the entire Contract between the parties, with no agreements other than those incorporated herein.

49. Massachusetts State Wage Rates

To comply with MGL Chapter 149, Section 27, the Contractor shall request and obtain updated state wage rate schedules and submit the updated state wage rates to the Owner (through the Engineer) 45 days before the annual anniversary date of the execution of the construction Contract as shown on page C-1 of the Contract. The Contractor shall use the updated state or federal wage rate schedule, as applicable, from the annual anniversary date until the next annual anniversary date, when another updated wage rate schedule will be available if requested 45 days in advance by the Contractor.

The Contractor shall pay prevailing wages as outlined in MGL Chapter 149, Sections 26 and 27 or under the Davis Bacon Act as stated below, whichever is higher, using the appropriate wage rate schedule. Increases in state prevailing wage rates shall not be an acceptable basis for the Contractor to request additional compensation.

It shall be the Contractor's responsibility to request the updated wage rates each year and to ensure that they are provided by the Owner. Where specific wage rates conflict, the higher wage rate shall govern. Increases in state prevailing wage rates shall not be an acceptable basis for the Contractor to request additional compensation, changes in bid amounts, change orders, or Contract Amendments.

50. Federal Wage Rates

This project shall use the federal wage determination for Highway Construction as indicated in the US Department of Labor, Employment Standards Administration, All Agency Memorandum No. 130 dated March 17, 1978 and No. 131 dated July 14, 1978.

The Contractor shall pay prevailing wages using the appropriate wage rate schedule.

As a general rule, the wage determination incorporated into a bid solicitation and related contract award establishes the minimum wage rates and fringe benefits which must be paid for the entire term of the contract. Where the proper wage determination is incorporated into a contract prior to award of the contract, wage determination modifications issued after bid opening are not applicable to the contract.

If one or more Contracts for this project are awarded more than 90 days after the Bid opening date, the federal wage determination that is current as of the date of award shall govern. Federal wage determinations are available at: <http://www.wdol.gov/dba.aspx>

Increases in Federal prevailing wage rates shall not be an acceptable basis for the Contractor to request additional compensation, changes in bid amounts, change orders, or Contract Amendments.

51. Severability

If any provision of this Contract is declared or found illegal, unenforceable, or void, then both parties shall be relieved of all obligations under that provision. The remainder of the Contract shall be enforced to the fullest extent permitted by law.

52. Disadvantaged Business Enterprise (DBE) and Small Business Programs

The Town of Mansfield Airport Commission, owner of the Mansfield Municipal Airport has established DBE and Small Business programs in accordance with 49 CFR Part 26 and the U. S. Department of Transportation (USDOT) regulations.

a) Anti-Discrimination:

The contractor, sub recipient 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:

- i. Withholding monthly progress payments;
- ii. Assessing sanctions;
- iii. Liquidated damages; and/or
- iv. Disqualifying the contractor from future bidding as non-responsible.

b) DBE Program:

It is the policy of the Town of Mansfield Airport Commission to ensure that DBEs as defined in Part 26, have an equal opportunity to receive and participate in DOT-assisted contracts. It is also Commission policy to engage in the following actions on a continuing basis:

- Ensure nondiscrimination in the award and administration of DOT- assisted contracts;
- Create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;
- Ensure that the DBE Program is narrowly tailored in accordance with applicable law;
- Ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
- Help remove barriers to the participation of DBEs in DOT assisted contracts;
- Promote the use of DBEs in all types of federally-assisted contracts and procurement activities;
- Assist the development of firms that can compete successfully in the market place outside the DBE Program; and
- Make appropriate use of the flexibility afforded to recipients of Federal financial assistance in establishing and providing opportunities for DBEs.

The Airport Manager, Mr. Kevin Bullock has been delegated as the DBE Liaison Officer. In that capacity, Mr. Bullock is responsible for implementing all aspects of the DBE program. Implementation of the DBE program is accorded the same priority as compliance with all other legal obligations incurred by the Town of Mansfield Airport Commission in its financial assistance agreements with the Department of Transportation.

Contractors must comply with the requirements of 49 CFR Part 26 and the AIP Federal Contract Provisions, as applicable to this project. A complete copy of 49 CFR Part 26 with Appendix A attachment is contained in Section VII.

- i. Seeking Subcontractors and Suppliers: For projects with a specific contract goal, contractors must make a good faith effort to provide notice to all firms, including small businesses and DBEs, of upcoming opportunities to supply materials or subcontract on federally funded projects. Some examples of good faith efforts would

be: contacting all firms on the state DBE or minority contractor listing to notify them of opportunities; compiling lists of firms that have previously shown an interest in working on federally funded projects and contacting them when bidding projects; using services like Construction Summary to advertise for suppliers and subcontractors; and before the start of the “bidding season” place ads in newspapers and on the company website to solicit letters of interest from firms. If the Contractor is unable to meet the DBE goal, they must utilize Good Faith Efforts guidelines and procedures in 49 CFR Part 26 including Appendix A.

- ii. Bidders List Collection Form: A Copy of Gale Form 9 (“Bidders List Collection Form”) must be submitted for every bidder who submits a quote/bid to the recipient and every potential subcontractor who submitted a quote/bid to each bidder. 49 CFR Part 26 collection of information from all bidders and subcontractors, including unsuccessful ones. This information must be submitted with the Contractor’s bid.
- iii. Prompt Payment: Prime Contractor can level the playing field for all Subcontractors and Suppliers by paying them promptly for satisfactory completion of their work. Contractors are required to pay all Subcontractors and Suppliers in accordance with the Prompt Payment clause in this Section.
- iv. Identification of DBE and Small Business Contractors Included in the Bid: The Prime Contractor is required to provide the anticipated DBE and Small Business utilization that is included in their bid. Gale Form 5 “Proposed Disadvantaged Business Enterprise (DBE) and Small Business Utilization” must be filled in and included with the Prime Contractor’s bid. The form must include the percentage of DBE participation and Small Business participation that the Prime Contractor anticipates achieving for the project. The form must include the name, proposed work, and dollar amount of the work that the DBE or Small Business will be providing.

For each DBE or Small Business listed on Gale Form 5, the Contractor must also submit a copy of Gale Form 6 “DBE/Small Business Letter of Intent” with detailed information on the firm.

For each DBE supplier listed in the Contractor’s bid, a DBE Regular Dealer/Distributor Form must be submitted. This form will allow the Owner to make a determination about whether the DBE will receive 60 percent credit as a regular dealer or 40 percent credit as a distributor.

- v. DBE and Small Business Termination and Substitution:
 - a. The contractor must utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains the Commission’s written consent as provided in 49 CFR Part 26; and
 - b. Unless the Owner’s consent is provided under 49 CFR Part 26, the prime contractor must not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

The Owner may provide such written consent only if it agrees, for reasons stated in our concurrence document, that the prime contractor has good cause to terminate the listed DBE or any portion of its work. Good cause does not exist if the prime contractor seeks to terminate a DBE or any portion of its work that is relied upon to obtain the contract so that the prime contractor can self-perform the work for which

the DBE contractor was engaged, or so that the prime contractor can substitute another DBE or non-DBE contractor after contract award. A definition of "Good Cause" under this agreement shall be in accordance with 49 CFR Part 26.53(f)(3).

The DBE and Small Business termination or substitution process is complicated and time consuming. The Contractor is not entitled to any contract time extensions as a result of the process. The Contractor may not make any delay claims against the Owner, nor will the Contractor be entitled to receive any additional compensation due to the termination or substitution of a Subcontractor or a Supplier.

- vi. **Commercially Useful Function:** DBEs and Small Businesses must perform a commercially useful function as defined by 49 CFR Part 26.55(c) to be counted in the calculation of DBE accomplishments. In particular, may not use any of the Prime Contractor's employees, equipment, or materials in the performance of their work.
- vii. **Calculating DBE Participation:** The Contractor shall consult 49 CFR Part 26 and understand the way DBE participation is counted on FAA funded projects such as this project. Only DBEs certified by the Massachusetts Supplier Diversity Office shall be considered a DBE for this project. DBE firms that are certified in other states and firms that think that they may be eligible to be certified as a DBE in Massachusetts are encouraged to contact the Massachusetts Supplier Diversity Office at 617-502-8843 .
- viii. **Construction Phase Information:** During the on-site construction work, the Prime Contractor shall instruct all their employees as well as all employees of all subcontractors and other on-site personnel to sign in each day at the Contractor's office trailer. In addition, the Contractor shall provide the Resident Engineer with a daily list of workers and equipment on site.
- ix. **Prompt Payment/Retainage:**
 - 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:
 - i. 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.
 - ii. 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.
- x. **Proof of Payment:** With each Periodic Cost Estimate (PCE), the Prime Contractor shall provide proof of payment of all Subcontractors and Suppliers whose work was included in the previous PCE. Proof of payment shall consist of a copy of a cancelled check or a certificate of payment signed by the Subcontractor or Supplier. The Commission may provide the Contractor with one or more forms to be filled out and returned to monitor and track payments. To track work by Subcontractors and Suppliers, the Prime Contractor shall submit copies of Gale Form 7 for every approved Subcontractor and Supplier with each PCE, even if the Subcontractor or Supplier did not do any work on the project or supply any materials to the project during the period covered by the PCE.

If the Contractor is in violation of this prompt payment requirement, the Commission may withhold the amount due to the Subcontractor or Supplier from future payments due to the Contractor until satisfactory proof of payment is received. If the Contractor is in violation of this prompt payment requirement four (4) or more times, the Commission may terminate the Contract for cause and / or may require the Contractor to pay some or all of their Subcontractors or Suppliers and provide proof of payment before the Subcontractor's or Supplier's work can be included a PCE.
- xi. **Record Retention:** The Commission requires prime contractors to maintain records and documents of payments to subcontractors, including DBEs, for a minimum of three (3) years unless otherwise provided by applicable record retention requirements for the Commission's financial assistance agreement, whichever is longer. These records will be made available for inspection upon request by any authorized representative of the Commission or DOT. This reporting requirement extends to all subcontractors, both DBE and non-DBE.
- xii. **Small Business Requirement:** On prime contracts not having DBE contract goals, prime contractors are required to provide subcontracting opportunities of a size that small businesses, including DBEs, can reasonably perform, rather than self-performing all the work involved.
- xiii. **Failure to Comply:** Failure by the contractor to carry out the requirements of 49 CFR Part 26 is a material breach of the contract and may result in the termination of the contract or such other remedies set forth in that section that the Commission deems appropriate if the prime contractor fails to comply with the requirements of this section.

END OF SECTION II - SUPPLEMENTAL GENERAL PROVISIONS

SECTION III – REQUIRED CONTRACT PROVISIONS FOR AIP AND OBLIGATED SPONSORS

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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:	1.6%
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 the **State of Massachusetts, Bristol County, Town of Mansfield.**

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

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.

Certification of Compliance with FAA Buy American Preference – Construction Projects

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with its proposal. The bidder or offeror must indicate how it intends to comply with 49 USC § 50101, BABA and other related Made in America Laws, U.S. statutes, guidance, and FAA policies, by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e., 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 iron, 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 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 the FAA evidence that documents the source and origin of the iron, steel, and/or manufactured product.
 - b) To faithfully comply with providing U.S. domestic products.
 - c) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
 - d) Certify that all construction materials used in the project are manufactured in the U.S.
- ☐ 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 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:
- a) To the 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 furnish U.S. domestic product for any waiver request that the FAA rejects.

- e)** 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 or manufactured goods 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 components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the “facility/project.” The required documentation for a Type 3 waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
- b) Listing of all manufactured products 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 and installation at project location.
- d) Percentage of non-domestic component and subcomponent cost as compared to total “facility” component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

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) A completed Content Percentage Worksheet and Final Assembly Questionnaire from
- b) At minimum two comparable equal bids and/or offers;
- 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

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 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

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
CIVIL RIGHTS – TITLE VI ASSURANCES**

Title VI Solicitation Notice:

The **Town of Mansfield**, 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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
DISADVANTAGED BUSINESS ENTERPRISE**

The requirements of 49 CFR part 26 apply to this contract. It is the policy of the Town of Mansfield to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

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 the Sponsor. 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 Sponsor. 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 **Contractor Assurance** (or an approved substitute DBE firm) without prior written consent of the Sponsor. 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 from the Sponsor. Unless the Sponsor 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.

The Sponsor may provide such written consent only if the Sponsor 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 the Sponsor 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 the Sponsor, 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 the Sponsor and the contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Sponsor should not approve the prime contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the Sponsor 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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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)].

**FEDERAL PROVISION
FOR
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).

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**FEDERAL PROVISION
FOR
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.

**END OF SECTION III – REQUIRED CONTRACT PROVISIONS FOR AIP AND OBLIGATED
SPONSORS**

SECTION IV – MASSACHUSETTS PREVAILING WAGE RATES



**THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS
Prevailing Wage Rates**

MAURA HEALY
Governor

KIM DRISCOLL
Lt. Governor

As determined by the Director under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

LAUREN JONES
Secretary
MICHAEL FLANAGAN
Director

City/Town: MANSFIELD

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.
- This annual update requirement is generally not applicable to 27F "rental of equipment" contracts. For such contracts, the prevailing wage rates issued by DLS shall remain in effect for the duration of the contract term. However, if the prevailing wage rate sheet issued does not contain wage rates for each year covered by the contract term, the Awarding Authority must request updated rate sheets from DLS and provide them to the contractor to ensure the correct rates are being paid throughout the duration of the contract. Additionally, if an Awarding Authority exercises an option to renew or extend the contract term, they must request updated rate sheets from DLS and provide them to the contractor.
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
(2 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10	1/1/2025	\$39.95	\$15.57	\$20.17	\$0.00	\$0.00	\$75.69
	6/1/2025	\$40.95	\$15.57	\$20.17	\$0.00	\$0.00	\$76.69
	12/1/2025	\$40.95	\$15.57	\$21.78	\$0.00	\$0.00	\$78.30
	1/1/2026	\$40.95	\$16.17	\$21.78	\$0.00	\$0.00	\$78.90
	6/1/2026	\$41.95	\$16.17	\$21.78	\$0.00	\$0.00	\$79.90
	12/1/2026	\$41.95	\$16.17	\$23.52	\$0.00	\$0.00	\$81.64
	1/1/2027	\$41.95	\$16.77	\$23.52	\$0.00	\$0.00	\$82.24
(3 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10	1/1/2025	\$40.02	\$15.57	\$20.17	\$0.00	\$0.00	\$75.76
	6/1/2025	\$41.02	\$15.57	\$20.17	\$0.00	\$0.00	\$76.76
	12/1/2025	\$41.02	\$15.57	\$21.78	\$0.00	\$0.00	\$78.37
	1/1/2026	\$41.02	\$16.17	\$21.78	\$0.00	\$0.00	\$78.97
	6/1/2026	\$42.02	\$16.17	\$21.78	\$0.00	\$0.00	\$79.97
	12/1/2026	\$42.02	\$16.17	\$23.52	\$0.00	\$0.00	\$81.71
	1/1/2027	\$42.02	\$16.77	\$23.52	\$0.00	\$0.00	\$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10	1/1/2025	\$40.14	\$15.57	\$20.17	\$0.00	\$0.00	\$75.88
	6/1/2025	\$41.14	\$15.57	\$20.17	\$0.00	\$0.00	\$76.88
	12/1/2025	\$41.14	\$15.57	\$21.78	\$0.00	\$0.00	\$78.49
	1/1/2026	\$41.14	\$16.17	\$21.78	\$0.00	\$0.00	\$79.09
	6/1/2026	\$42.14	\$16.17	\$21.78	\$0.00	\$0.00	\$80.09
	12/1/2026	\$42.14	\$16.17	\$23.52	\$0.00	\$0.00	\$81.83
	1/1/2027	\$42.14	\$16.77	\$23.52	\$0.00	\$0.00	\$82.43
ADS/SUBMERSIBLE PILOT PILE DRIVER LOCAL 56	1/1/2024	\$117.16	\$10.08	\$11.62	\$12.67	\$0.00	\$151.53
For apprentice rates see "Apprentice- PILE DRIVER"							
AIR TRACK OPERATOR LABORERS	12/1/2024	\$39.70	\$9.90	\$9.25	\$9.11	\$0.00	\$67.96
	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.11	\$0.00	\$69.35
	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.11	\$0.00	\$70.73
	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.11	\$0.00	\$72.17
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.80	\$9.90	\$9.25	\$9.11	\$0.00	\$75.06
	12/1/2027	\$48.25	\$9.90	\$9.25	\$9.11	\$0.00	\$76.51
	6/1/2028	\$49.75	\$9.90	\$9.25	\$9.11	\$0.00	\$78.01
	12/1/2028	\$51.25	\$9.90	\$9.25	\$9.11	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
AIR TRACK OPERATOR (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.70	\$9.90	\$9.25	\$9.21	\$0.00	\$68.06
	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.21	\$0.00	\$69.45
	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.21	\$0.00	\$70.83
	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.21	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASBESTOS WORKER (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6	12/1/2024	\$42.80	\$14.50	\$4.30	\$6.75	\$0.00	\$68.35
	6/1/2025	\$43.80	\$14.50	\$4.30	\$6.75	\$0.00	\$69.35
	12/1/2025	\$44.80	\$14.50	\$4.30	\$6.75	\$0.00	\$70.35

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ASPHALT RAKER LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
ASPHALT RAKER (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.21	\$0.00	\$67.56
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE OPERATING ENGINEERS LOCAL 4	12/1/2024	\$57.03	\$15.55	\$13.25	\$3.25	\$0.00	\$89.08
	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BACKHOE/FRONT-END LOADER OPERATING ENGINEERS LOCAL 4	12/1/2024	\$57.03	\$15.55	\$13.25	\$3.25	\$0.00	\$89.08
	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER LABORERS	12/1/2024	\$39.70	\$9.90	\$9.25	\$9.11	\$0.00	\$67.96
	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.11	\$0.00	\$69.35
	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.11	\$0.00	\$70.73
	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.11	\$0.00	\$72.17
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.80	\$9.90	\$9.25	\$9.11	\$0.00	\$75.06
	12/1/2027	\$48.25	\$9.90	\$9.25	\$9.11	\$0.00	\$76.51

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	\$49.75	\$9.90	\$9.25	\$9.11	\$0.00	\$78.01
	12/1/2028	\$51.25	\$9.90	\$9.25	\$9.11	\$0.00	\$79.51

For apprentice rates see "Apprentice- LABORER"

BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	12/1/2024	\$39.70	\$9.90	\$9.25	\$9.21	\$0.00	\$68.06
LABORERS	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.21	\$0.00	\$69.45
	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.21	\$0.00	\$70.83
	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.21	\$0.00	\$73.71

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

BOILER MAKER	1/1/2024	\$48.12	\$7.07	\$14.60	\$6.00	\$0.00	\$75.79
BOILERMAKERS LOCAL 29							

Apprentice: BOILER MAKER

Effective Date: 1/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	65.00	\$31.28	\$7.07	\$9.32	\$3.90	\$0.00	\$51.57
2	65.00	\$31.28	\$7.07	\$9.32	\$3.90	\$0.00	\$51.57
3	70.00	\$33.68	\$7.07	\$10.03	\$4.20	\$0.00	\$54.98
4	75.00	\$36.09	\$7.07	\$10.74	\$4.50	\$0.00	\$58.40
5	80.00	\$38.50	\$7.07	\$11.45	\$4.80	\$0.00	\$61.82
6	85.00	\$40.90	\$7.07	\$12.18	\$5.10	\$0.00	\$65.25
7	90.00	\$43.31	\$7.07	\$12.88	\$5.40	\$0.00	\$68.66
8	95.00	\$45.71	\$7.07	\$13.62	\$5.70	\$0.00	\$72.10

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	2/1/2025	\$63.66	\$11.49	\$15.57	\$7.33	\$0.00	\$98.05
BRICKLAYERS LOCAL 3	8/1/2025	\$65.81	\$11.49	\$15.57	\$7.33	\$0.00	\$100.20
	2/1/2026	\$67.16	\$11.49	\$15.57	\$7.33	\$0.00	\$101.55
	8/1/2026	\$69.36	\$11.49	\$15.57	\$7.33	\$0.00	\$103.75
	2/1/2027	\$70.76	\$11.49	\$15.57	\$7.33	\$0.00	\$105.15

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)

Effective Date: 2/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$31.83	\$11.49	\$15.57	\$7.33	\$0.00	\$66.22
2	60.00	\$38.20	\$11.49	\$15.57	\$7.33	\$0.00	\$72.59
3	70.00	\$44.56	\$11.49	\$15.57	\$7.33	\$0.00	\$78.95
4	80.00	\$50.93	\$11.49	\$15.57	\$7.33	\$0.00	\$85.32
5	90.00	\$57.29	\$11.49	\$15.57	\$7.33	\$0.00	\$91.68

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																
<div>Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)</div> <div>Effective Date: 8/1/2025</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>1</td><td>50.00</td><td>\$32.91</td><td>\$11.49</td><td>\$15.57</td><td>\$7.33</td><td>\$0.00</td><td>\$67.30</td></tr><tr><td>2</td><td>60.00</td><td>\$39.49</td><td>\$11.49</td><td>\$15.57</td><td>\$7.33</td><td>\$0.00</td><td>\$73.88</td></tr><tr><td>3</td><td>70.00</td><td>\$46.07</td><td>\$11.49</td><td>\$15.57</td><td>\$7.33</td><td>\$0.00</td><td>\$80.46</td></tr><tr><td>4</td><td>80.00</td><td>\$52.65</td><td>\$11.49</td><td>\$15.57</td><td>\$7.33</td><td>\$0.00</td><td>\$87.04</td></tr><tr><td>5</td><td>90.00</td><td>\$59.23</td><td>\$11.49</td><td>\$15.57</td><td>\$7.33</td><td>\$0.00</td><td>\$93.62</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	1	50.00	\$32.91	\$11.49	\$15.57	\$7.33	\$0.00	\$67.30	2	60.00	\$39.49	\$11.49	\$15.57	\$7.33	\$0.00	\$73.88	3	70.00	\$46.07	\$11.49	\$15.57	\$7.33	\$0.00	\$80.46	4	80.00	\$52.65	\$11.49	\$15.57	\$7.33	\$0.00	\$87.04	5	90.00	\$59.23	\$11.49	\$15.57	\$7.33	\$0.00	\$93.62
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																
1	50.00	\$32.91	\$11.49	\$15.57	\$7.33	\$0.00	\$67.30																																																
2	60.00	\$39.49	\$11.49	\$15.57	\$7.33	\$0.00	\$73.88																																																
3	70.00	\$46.07	\$11.49	\$15.57	\$7.33	\$0.00	\$80.46																																																
4	80.00	\$52.65	\$11.49	\$15.57	\$7.33	\$0.00	\$87.04																																																
5	90.00	\$59.23	\$11.49	\$15.57	\$7.33	\$0.00	\$93.62																																																
BULLDOZER/GRADER/SCRAPER OPERATING ENGINEERS LOCAL 4	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45																																																
	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73																																																
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17																																																
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45																																																
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89																																																
For apprentice rates see "Apprentice- OPERATING ENGINEERS"																																																							
CAISSON & UNDERPINNING BOTTOM MAN LABORERS	12/1/2024	\$47.35	\$9.90	\$9.25	\$9.80	\$0.00	\$76.30																																																
	6/1/2025	\$48.85	\$9.90	\$9.25	\$9.80	\$0.00	\$77.80																																																
	12/1/2025	\$50.35	\$9.90	\$9.25	\$9.80	\$0.00	\$79.30																																																
	6/1/2026	\$51.90	\$9.90	\$9.25	\$9.80	\$0.00	\$80.85																																																
	12/1/2026	\$53.40	\$9.90	\$9.25	\$9.80	\$0.00	\$82.35																																																
For apprentice rates see "Apprentice- LABORER"																																																							
CAISSON & UNDERPINNING LABORER LABORERS	12/1/2024	\$46.20	\$9.90	\$9.25	\$9.80	\$0.00	\$75.15																																																
	6/1/2025	\$47.70	\$9.90	\$9.25	\$9.80	\$0.00	\$76.65																																																
	12/1/2025	\$49.20	\$9.90	\$9.25	\$9.80	\$0.00	\$78.15																																																
	6/1/2026	\$50.75	\$9.90	\$9.25	\$9.80	\$0.00	\$79.70																																																
	12/1/2026	\$52.25	\$9.90	\$9.25	\$9.80	\$0.00	\$81.20																																																
For apprentice rates see "Apprentice- LABORER"																																																							
CAISSON & UNDERPINNING TOP MAN LABORERS	12/1/2024	\$46.53	\$9.90	\$9.25	\$9.80	\$0.00	\$75.48																																																
	6/1/2025	\$48.03	\$9.90	\$9.25	\$9.80	\$0.00	\$76.98																																																
	12/1/2025	\$49.53	\$9.90	\$9.25	\$9.80	\$0.00	\$78.48																																																
	6/1/2026	\$51.08	\$9.90	\$9.25	\$9.80	\$0.00	\$80.03																																																
	12/1/2026	\$52.58	\$9.90	\$9.25	\$9.80	\$0.00	\$81.53																																																
For apprentice rates see "Apprentice- LABORER"																																																							
CARBIDE CORE DRILL OPERATOR LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46																																																
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85																																																
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23																																																
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67																																																
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11																																																
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56																																																
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01																																																
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51																																																
12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01																																																	
For apprentice rates see "Apprentice- LABORER"																																																							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CARPENTER	3/1/2025	\$49.62	\$9.83	\$11.47	\$8.50	\$0.00	\$79.42
CARPENTERS LOCAL 336	9/1/2025	\$50.87	\$9.83	\$11.47	\$8.50	\$0.00	\$80.67
	3/1/2026	\$52.12	\$9.83	\$11.47	\$8.50	\$0.00	\$81.92
	9/1/2026	\$53.37	\$9.83	\$11.47	\$8.50	\$0.00	\$83.17
	3/1/2027	\$54.62	\$9.83	\$11.47	\$8.50	\$0.00	\$84.42

Apprentice: CARPENTER							
Effective Date: 3/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$22.33	\$9.83	\$0.00	\$1.73	\$0.00	\$33.89
2	45.00	\$22.33	\$9.83	\$0.00	\$1.73	\$0.00	\$33.89
3	55.00	\$27.29	\$9.83	\$0.00	\$3.40	\$0.00	\$40.52
4	55.00	\$27.29	\$9.83	\$0.00	\$3.40	\$0.00	\$40.52
5	70.00	\$34.73	\$9.83	\$11.41	\$5.10	\$0.00	\$61.07
6	70.00	\$34.73	\$9.83	\$11.41	\$5.10	\$0.00	\$61.07
7	80.00	\$39.70	\$9.83	\$11.44	\$6.80	\$0.00	\$67.77
8	80.00	\$39.70	\$9.83	\$11.44	\$6.80	\$0.00	\$67.77

Apprentice: CARPENTER							
Effective Date: 9/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$22.89	\$9.83	\$0.00	\$1.73	\$0.00	\$34.45
2	45.00	\$22.89	\$9.83	\$0.00	\$1.73	\$0.00	\$34.45
3	55.00	\$27.98	\$9.83	\$0.00	\$3.40	\$0.00	\$41.21
4	55.00	\$27.98	\$9.83	\$0.00	\$3.40	\$0.00	\$41.21
5	70.00	\$35.61	\$9.83	\$11.41	\$5.10	\$0.00	\$61.95
6	70.00	\$35.61	\$9.83	\$11.41	\$5.10	\$0.00	\$61.95
7	80.00	\$40.70	\$9.83	\$11.44	\$6.80	\$0.00	\$68.77
8	80.00	\$40.70	\$9.83	\$11.44	\$6.80	\$0.00	\$68.77

CARPENTER WOOD FRAME	10/1/2024	\$26.65	\$7.02	\$3.80	\$1.00	\$0.00	\$38.47
CARPENTERS LOCAL 336	10/1/2025	\$27.75	\$7.02	\$3.80	\$1.00	\$0.00	\$39.57
	10/1/2026	\$28.85	\$7.02	\$3.80	\$1.00	\$0.00	\$40.67

All Aspects of New Wood Frame Work

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$15.99	\$7.02	\$0.00	\$0.00	\$0.00	\$23.01
2	60.00	\$15.99	\$7.02	\$0.00	\$0.00	\$0.00	\$23.01
3	65.00	\$17.32	\$7.02	\$0.00	\$1.00	\$0.00	\$25.34
4	70.00	\$18.66	\$7.02	\$0.00	\$1.00	\$0.00	\$26.68
5	75.00	\$19.99	\$7.02	\$3.80	\$1.00	\$0.00	\$31.81

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CARPENTER WOOD FRAME Effective Date: 10/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
6	80.00	\$21.32	\$7.02	\$3.80	\$1.00	\$0.00	\$33.14
7	85.00	\$22.65	\$7.02	\$3.80	\$1.00	\$0.00	\$34.47
8	90.00	\$23.99	\$7.02	\$3.80	\$1.00	\$0.00	\$35.81
Apprentice: CARPENTER WOOD FRAME Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$16.65	\$7.02	\$0.00	\$0.00	\$0.00	\$23.67
2	60.00	\$16.65	\$7.02	\$0.00	\$0.00	\$0.00	\$23.67
3	65.00	\$18.04	\$7.02	\$0.00	\$1.00	\$0.00	\$26.06
4	70.00	\$19.43	\$7.02	\$0.00	\$1.00	\$0.00	\$27.45
5	75.00	\$20.81	\$7.02	\$3.80	\$1.00	\$0.00	\$32.63
6	80.00	\$22.20	\$7.02	\$3.80	\$1.00	\$0.00	\$34.02
7	85.00	\$23.59	\$7.02	\$3.80	\$1.00	\$0.00	\$35.41
8	90.00	\$24.98	\$7.02	\$3.80	\$1.00	\$0.00	\$36.80
CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3	7/1/2024	\$49.19	\$13.35	\$16.43	\$7.78	\$1.80	\$88.55
Apprentice: CEMENT MASONRY/PLASTERING Effective Date: 7/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.60	\$13.35	\$16.43	\$0.00	\$0.00	\$54.38
2	60.00	\$29.51	\$13.35	\$16.43	\$2.78	\$1.80	\$63.87
3	65.00	\$31.97	\$13.35	\$16.43	\$3.78	\$1.80	\$67.33
4	70.00	\$34.43	\$13.35	\$16.43	\$4.78	\$1.80	\$70.79
5	75.00	\$36.89	\$13.35	\$16.43	\$5.78	\$1.80	\$74.25
6	80.00	\$39.35	\$13.35	\$16.43	\$6.78	\$1.80	\$77.71
7	90.00	\$44.27	\$13.35	\$16.43	\$7.78	\$1.80	\$83.63
CHAIN SAW OPERATOR LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4	12/1/2024	\$58.18	\$15.55	\$13.25	\$3.25	\$0.00	\$90.23
	6/1/2025	\$59.51	\$15.55	\$13.25	\$3.25	\$0.00	\$91.56
	12/1/2025	\$60.98	\$15.55	\$13.25	\$3.25	\$0.00	\$93.03
	6/1/2026	\$62.31	\$15.55	\$13.25	\$3.25	\$0.00	\$94.36
	12/1/2026	\$63.79	\$15.55	\$13.25	\$3.25	\$0.00	\$95.84
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4	12/1/2024	\$36.67	\$15.55	\$13.25	\$3.25	\$0.00	\$68.72
	6/1/2025	\$37.52	\$15.55	\$13.25	\$3.25	\$0.00	\$69.57
	12/1/2025	\$38.47	\$15.55	\$13.25	\$3.25	\$0.00	\$70.52
	6/1/2026	\$39.33	\$15.55	\$13.25	\$3.25	\$0.00	\$71.38
	12/1/2026	\$40.28	\$15.55	\$13.25	\$3.25	\$0.00	\$72.33
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DELEADER (BRIDGE) PAINTERS LOCAL 35	1/1/2025	\$58.46	\$9.95	\$11.85	\$12.10	\$0.00	\$92.36

Apprentice: DELEADER (BRIDGE)

Effective Date: 1/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.23	\$9.95	\$0.00	\$0.00	\$0.00	\$39.18
2	55.00	\$32.15	\$9.95	\$0.00	\$6.66	\$0.00	\$48.76
3	60.00	\$35.08	\$9.95	\$0.00	\$7.26	\$0.00	\$52.29
4	65.00	\$38.00	\$9.95	\$0.00	\$7.87	\$0.00	\$55.82
5	70.00	\$40.92	\$9.95	\$11.85	\$8.47	\$0.00	\$71.19
6	75.00	\$43.85	\$9.95	\$11.85	\$9.08	\$0.00	\$74.73
7	80.00	\$46.77	\$9.95	\$11.85	\$9.68	\$0.00	\$78.25
8	90.00	\$52.61	\$9.95	\$11.85	\$10.89	\$0.00	\$85.30

DEMO: ADZEMAN LABORERS	12/2/2024	\$46.25	\$9.90	\$9.25	\$9.65	\$0.00	\$75.05
	6/2/2025	\$47.75	\$9.90	\$9.25	\$9.65	\$0.00	\$76.55
	12/1/2025	\$49.25	\$9.90	\$9.25	\$9.65	\$0.00	\$78.05
	6/1/2026	\$50.80	\$9.90	\$9.25	\$9.65	\$0.00	\$79.60
	12/7/2026	\$52.30	\$9.90	\$9.25	\$9.65	\$0.00	\$81.10
	6/7/2027	\$53.90	\$9.90	\$9.25	\$9.65	\$0.00	\$82.70
	12/6/2027	\$55.50	\$9.90	\$9.25	\$9.65	\$0.00	\$84.30
	6/5/2028	\$57.18	\$9.90	\$9.25	\$9.65	\$0.00	\$85.98
For apprentice rates see "Apprentice- LABORER"							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS	12/2/2024	\$47.25	\$9.90	\$9.25	\$9.65	\$0.00	\$76.05
	6/2/2025	\$48.75	\$9.90	\$9.25	\$9.65	\$0.00	\$77.55
	12/1/2025	\$50.25	\$9.90	\$9.25	\$9.65	\$0.00	\$79.05
	6/1/2026	\$51.80	\$9.90	\$9.25	\$9.65	\$0.00	\$80.60
	12/7/2026	\$53.30	\$9.90	\$9.25	\$9.65	\$0.00	\$82.10
	6/7/2027	\$54.90	\$9.90	\$9.25	\$9.65	\$0.00	\$83.70
	12/6/2027	\$56.50	\$9.90	\$9.25	\$9.65	\$0.00	\$85.30
	6/5/2028	\$58.18	\$9.90	\$9.25	\$9.65	\$0.00	\$86.98

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/4/2028	\$59.85	\$9.90	\$9.25	\$9.65	\$0.00	\$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BURNERS LABORERS	12/2/2024	\$47.00	\$9.90	\$9.25	\$9.65	\$0.00	\$75.80
	6/2/2025	\$48.50	\$9.90	\$9.25	\$9.65	\$0.00	\$77.30
	12/1/2025	\$50.00	\$9.90	\$9.25	\$9.65	\$0.00	\$78.80
	6/1/2026	\$51.55	\$9.90	\$9.25	\$9.65	\$0.00	\$80.35
	12/7/2026	\$53.05	\$9.90	\$9.25	\$9.65	\$0.00	\$81.85
	6/7/2027	\$54.65	\$9.90	\$9.25	\$9.65	\$0.00	\$83.45
	12/6/2027	\$56.25	\$9.90	\$9.25	\$9.65	\$0.00	\$85.05
	6/5/2028	\$57.93	\$9.90	\$9.25	\$9.65	\$0.00	\$86.73
	12/4/2028	\$59.60	\$9.90	\$9.25	\$9.65	\$0.00	\$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: CONCRETE CUTTER/SAWYER LABORERS	12/2/2024	\$47.25	\$9.90	\$9.25	\$9.65	\$0.00	\$76.05
	6/2/2025	\$48.75	\$9.90	\$9.25	\$9.65	\$0.00	\$77.55
	12/1/2025	\$50.25	\$9.90	\$9.25	\$9.65	\$0.00	\$79.05
	6/1/2026	\$51.80	\$9.90	\$9.25	\$9.65	\$0.00	\$80.60
	12/7/2026	\$53.30	\$9.90	\$9.25	\$9.65	\$0.00	\$82.10
	6/7/2027	\$54.90	\$9.90	\$9.25	\$9.65	\$0.00	\$83.70
	12/6/2027	\$56.50	\$9.90	\$9.25	\$9.65	\$0.00	\$85.30
	6/5/2028	\$58.18	\$9.90	\$9.25	\$9.65	\$0.00	\$86.98
	12/4/2028	\$59.85	\$9.90	\$9.25	\$9.65	\$0.00	\$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR LABORERS	12/2/2024	\$47.00	\$9.90	\$9.25	\$9.65	\$0.00	\$75.80
	6/2/2025	\$48.50	\$9.90	\$9.25	\$9.65	\$0.00	\$77.30
	12/1/2025	\$50.00	\$9.90	\$9.25	\$9.65	\$0.00	\$78.80
	6/1/2026	\$51.55	\$9.90	\$9.25	\$9.65	\$0.00	\$80.35
	12/7/2026	\$53.05	\$9.90	\$9.25	\$9.65	\$0.00	\$81.85
	6/7/2027	\$54.65	\$9.90	\$9.25	\$9.65	\$0.00	\$83.45
	12/6/2027	\$56.25	\$9.90	\$9.25	\$9.65	\$0.00	\$85.05
	6/5/2028	\$57.93	\$9.90	\$9.25	\$9.65	\$0.00	\$86.73
	12/4/2028	\$59.60	\$9.90	\$9.25	\$9.65	\$0.00	\$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS	12/2/2024	\$46.25	\$9.90	\$9.25	\$9.65	\$0.00	\$75.05
	6/2/2025	\$47.75	\$9.90	\$9.25	\$9.65	\$0.00	\$76.55
	12/1/2025	\$49.25	\$9.90	\$9.25	\$9.65	\$0.00	\$78.05
	6/1/2026	\$50.80	\$9.90	\$9.25	\$9.65	\$0.00	\$79.60
	12/7/2026	\$52.30	\$9.90	\$9.25	\$9.65	\$0.00	\$81.10
	6/7/2027	\$53.90	\$9.90	\$9.25	\$9.65	\$0.00	\$82.70
	12/6/2027	\$55.50	\$9.90	\$9.25	\$9.65	\$0.00	\$84.30
	6/5/2028	\$57.18	\$9.90	\$9.25	\$9.65	\$0.00	\$85.98
	12/4/2028	\$58.85	\$9.90	\$9.25	\$9.65	\$0.00	\$87.65
For apprentice rates see "Apprentice- LABORER"							
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DIVER PILE DRIVER LOCAL 56	8/1/2024	\$78.11	\$10.08	\$11.62	\$10.04	\$0.00	\$109.85
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A \$69.83, 3A \$91.79,4A \$102.14 Total Rate							
DIVER TENDER PILE DRIVER LOCAL 56	8/1/2024	\$55.79	\$10.08	\$11.62	\$12.67	\$0.00	\$90.16
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A \$54.20, 3A \$73.93,4A \$82.05 Total Rate							
DIVER TENDER (EFFLUENT) PILE DRIVER LOCAL 56	8/1/2024	\$83.69	\$10.08	\$11.62	\$12.67	\$0.00	\$118.06
For apprentice rates see "Apprentice- PILE DRIVER"							
DIVER/SLURRY (EFFLUENT) PILE DRIVER LOCAL 56	8/1/2024	\$117.16	\$10.08	\$11.62	\$12.67	\$0.00	\$151.53
For apprentice rates see "Apprentice- PILE DRIVER"							
DRAWBRIDGE OPERATOR (Construction) DRAWBRIDGE - SEIU LOCAL 888	7/1/2020	\$26.77	\$6.67	\$3.93	\$0.00	\$0.16	\$37.53
ELECTRICIAN ELECTRICIANS LOCAL 223	9/1/2024	\$50.02	\$12.00	\$14.22	\$3.50	\$0.00	\$79.74
	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11
	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78

Apprentice: ELECTRICIAN**Effective Date: 9/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$20.01	\$12.00	\$0.60	\$0.00	\$0.00	\$32.61
2	45.00	\$22.51	\$12.00	\$0.68	\$0.00	\$0.00	\$35.19
3	50.00	\$25.01	\$12.00	\$0.75	\$0.00	\$0.00	\$37.76
4	55.00	\$27.51	\$12.00	\$0.84	\$2.25	\$0.00	\$48.10
5	60.00	\$30.01	\$12.00	\$0.90	\$2.25	\$0.00	\$51.16
6	65.00	\$32.51	\$12.00	\$0.99	\$2.25	\$0.00	\$54.25
7	70.00	\$35.01	\$12.00	\$1.05	\$2.25	\$0.00	\$57.31
8	75.00	\$37.52	\$12.00	\$1.11	\$2.25	\$0.00	\$60.41

Apprentice: ELECTRICIAN**Effective Date: 9/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$20.90	\$12.25	\$0.63	\$0.00	\$0.00	\$33.78
2	45.00	\$23.51	\$12.25	\$0.71	\$0.00	\$0.00	\$36.47
3	50.00	\$26.13	\$12.25	\$0.78	\$0.00	\$0.00	\$39.16
4	55.00	\$28.74	\$12.25	\$0.86	\$2.50	\$0.00	\$50.10
5	60.00	\$31.35	\$12.25	\$0.93	\$2.50	\$0.00	\$53.31

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: ELECTRICIAN Effective Date: 9/1/2025							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Step 6	65.00	\$33.96	\$12.25	\$7.82	\$2.50	\$0.00	\$56.53
Step 7	70.00	\$36.58	\$12.25	\$8.41	\$2.50	\$0.00	\$59.74
Step 8	75.00	\$39.19	\$12.25	\$9.02	\$2.50	\$0.00	\$62.96
ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2022	\$65.62	\$16.03	\$10.71	\$9.50	\$0.00	\$101.86
Apprentice: ELEVATOR CONSTRUCTOR Effective Date: 1/1/2022							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Step 1	50.00	\$32.81	\$16.03	\$0.00	\$0.00	\$0.00	\$48.84
Step 2	55.00	\$36.09	\$16.03	\$10.71	\$9.50	\$0.00	\$72.33
Step 3	65.00	\$42.65	\$16.03	\$10.71	\$9.50	\$0.00	\$78.89
Step 4	70.00	\$45.93	\$16.03	\$10.71	\$9.50	\$0.00	\$82.17
Step 5	80.00	\$52.50	\$16.03	\$10.71	\$9.50	\$0.00	\$88.74
ELEVATOR CONSTRUCTOR HELPER ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2022	\$45.93	\$16.03	\$10.71	\$9.50	\$0.00	\$82.17
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.21	\$0.00	\$67.56
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 4	5/1/2025	\$53.22	\$15.30	\$13.15	\$3.25	\$0.00	\$84.92
	11/1/2025	\$54.51	\$15.30	\$13.15	\$3.25	\$0.00	\$86.21
	5/1/2026	\$55.95	\$15.30	\$13.15	\$3.25	\$0.00	\$87.65
	11/1/2026	\$57.24	\$15.30	\$13.15	\$3.25	\$0.00	\$88.94
	5/1/2027	\$58.67	\$15.30	\$13.15	\$3.25	\$0.00	\$90.37
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 4	5/1/2025	\$54.82	\$15.30	\$13.15	\$3.25	\$0.00	\$86.52
	11/1/2025	\$56.12	\$15.30	\$13.15	\$3.25	\$0.00	\$87.82
	5/1/2026	\$57.57	\$15.30	\$13.15	\$3.25	\$0.00	\$89.27
	11/1/2026	\$58.87	\$15.30	\$13.15	\$3.25	\$0.00	\$90.57
	5/1/2027	\$60.32	\$15.30	\$13.15	\$3.25	\$0.00	\$92.02
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY	5/1/2025	\$26.22	\$15.30	\$13.15	\$3.25	\$0.00	\$57.92

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 4	11/1/2025	\$26.98	\$15.30	\$13.15	\$3.25	\$0.00	\$58.68
	5/1/2026	\$27.83	\$15.30	\$13.15	\$3.25	\$0.00	\$59.53
	11/1/2026	\$28.59	\$15.30	\$13.15	\$3.25	\$0.00	\$60.29
	5/1/2027	\$29.44	\$15.30	\$13.15	\$3.25	\$0.00	\$61.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIRE ALARM INSTALLER ELECTRICIANS LOCAL 223	9/1/2024	\$50.02	\$12.00	\$14.22	\$3.50	\$0.00	\$79.74
	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11
	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING ELECTRICIANS LOCAL 223	9/1/2024	\$50.02	\$12.00	\$14.22	\$3.50	\$0.00	\$79.74
	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11
	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN (ASST. ENGINEER) OPERATING ENGINEERS LOCAL 4	12/1/2024	\$45.96	\$15.55	\$13.25	\$3.25	\$0.00	\$78.01
	6/1/2025	\$47.02	\$15.55	\$13.25	\$3.25	\$0.00	\$79.07
	12/1/2025	\$48.19	\$15.55	\$13.25	\$3.25	\$0.00	\$80.24
	6/1/2026	\$49.25	\$15.55	\$13.25	\$3.25	\$0.00	\$81.30
	12/1/2026	\$50.43	\$15.55	\$13.25	\$3.25	\$0.00	\$82.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$27.01	\$9.90	\$9.25	\$9.21	\$0.00	\$55.37
	6/1/2025	\$28.09	\$9.90	\$9.25	\$9.21	\$0.00	\$56.45
	12/1/2025	\$28.09	\$9.90	\$9.25	\$9.21	\$0.00	\$56.45
	6/1/2026	\$29.21	\$9.90	\$9.25	\$9.21	\$0.00	\$57.57
	12/1/2026	\$29.21	\$9.90	\$9.25	\$9.21	\$0.00	\$57.57
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FLOORCOVERER FLOORCOVERERS LOCAL 2168	3/1/2025	\$57.73	\$8.83	\$11.47	\$8.80	\$0.00	\$86.83
	9/1/2025	\$59.23	\$8.83	\$11.47	\$8.80	\$0.00	\$88.33
	3/1/2026	\$60.73	\$8.83	\$11.47	\$8.80	\$0.00	\$89.83
	9/1/2026	\$62.23	\$8.83	\$11.47	\$8.80	\$0.00	\$91.33
	3/1/2027	\$63.73	\$8.83	\$11.47	\$8.80	\$0.00	\$92.83

Apprentice: FLOORCOVERER**Effective Date: 3/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$25.98	\$8.83	\$0.00	\$1.76	\$0.00	\$36.57
2	45.00	\$25.98	\$8.83	\$0.00	\$1.76	\$0.00	\$36.57
3	55.00	\$31.75	\$8.83	\$0.00	\$3.52	\$0.00	\$44.10
4	55.00	\$31.75	\$8.83	\$0.00	\$3.52	\$0.00	\$44.10
5	70.00	\$40.41	\$8.83	\$11.47	\$5.28	\$0.00	\$65.99
6	70.00	\$40.41	\$8.83	\$11.47	\$5.28	\$0.00	\$65.99
7	80.00	\$46.18	\$8.83	\$11.47	\$7.04	\$0.00	\$73.52
8	80.00	\$46.18	\$8.83	\$11.47	\$7.04	\$0.00	\$73.52

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: FLOORCOVERER Effective Date: 9/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$26.65	\$8.83	\$0.00	\$1.76	\$0.00	\$37.24
2	45.00	\$26.65	\$8.83	\$0.00	\$1.76	\$0.00	\$37.24
3	55.00	\$32.58	\$8.83	\$0.00	\$3.52	\$0.00	\$44.93
4	55.00	\$32.58	\$8.83	\$0.00	\$3.52	\$0.00	\$44.93
5	70.00	\$41.46	\$8.83	\$11.47	\$5.28	\$0.00	\$67.04
6	70.00	\$41.46	\$8.83	\$11.47	\$5.28	\$0.00	\$67.04
7	80.00	\$47.38	\$8.83	\$11.47	\$7.04	\$0.00	\$74.72
8	80.00	\$47.38	\$8.83	\$11.47	\$7.04	\$0.00	\$74.72
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FORK LIFT/CHERRY PICKER OPERATING ENGINEERS LOCAL 4	12/1/2024	\$57.03	\$15.55	\$13.25	\$3.25	\$0.00	\$89.08
	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
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GENERATOR/LIGHTING PLANT/HEATERS OPERATING ENGINEERS LOCAL 4	12/1/2024	\$36.67	\$15.55	\$13.25	\$3.25	\$0.00	\$68.72
	6/1/2025	\$37.52	\$15.55	\$13.25	\$3.25	\$0.00	\$69.57
	12/1/2025	\$38.47	\$15.55	\$13.25	\$3.25	\$0.00	\$70.52
	6/1/2026	\$39.33	\$15.55	\$13.25	\$3.25	\$0.00	\$71.38
	12/1/2026	\$40.28	\$15.55	\$13.25	\$3.25	\$0.00	\$72.33
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
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GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) GLAZIERS LOCAL 1333	6/1/2020	\$39.18	\$10.80	\$6.70	\$3.75	\$0.00	\$60.43
Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) Effective Date: 6/1/2020							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$19.59	\$10.80	\$1.50	\$0.30	\$0.00	\$32.19
2	56.25	\$22.04	\$10.80	\$1.50	\$0.30	\$0.00	\$34.64
3	62.50	\$24.49	\$10.80	\$1.95	\$0.50	\$0.00	\$37.74
4	68.75	\$26.94	\$10.80	\$1.95	\$0.50	\$0.00	\$40.19
5	75.00	\$29.39	\$10.80	\$2.50	\$0.65	\$0.00	\$43.34
6	81.25	\$31.83	\$10.80	\$2.50	\$0.65	\$0.00	\$45.78
7	87.50	\$34.28	\$10.80	\$6.70	\$3.75	\$0.00	\$55.53
8	93.75	\$36.73	\$10.80	\$6.70	\$3.75	\$0.00	\$57.98
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HOISTING ENGINEER/CRANES/GRADALLS OPERATING ENGINEERS LOCAL 4	12/1/2024	\$57.03	\$15.55	\$13.25	\$3.25	\$0.00	\$89.08
	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS							
Effective Date: 12/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$31.37	\$0.00	\$0.00	\$0.00	\$0.00	\$31.37
2	60.00	\$34.22	\$15.55	\$13.25	\$3.25	\$0.00	\$66.27
3	65.00	\$37.07	\$15.55	\$13.25	\$3.25	\$0.00	\$69.12
4	70.00	\$39.92	\$15.55	\$13.25	\$3.25	\$0.00	\$71.97
5	75.00	\$42.77	\$15.55	\$13.25	\$3.25	\$0.00	\$74.82
6	80.00	\$45.62	\$15.55	\$13.25	\$3.25	\$0.00	\$77.67
7	85.00	\$48.48	\$15.55	\$13.25	\$3.25	\$0.00	\$80.53
8	90.00	\$51.33	\$15.55	\$13.25	\$3.25	\$0.00	\$83.38

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS							
Effective Date: 6/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$32.08	\$0.00	\$0.00	\$0.00	\$0.00	\$32.08
2	60.00	\$35.00	\$15.55	\$13.25	\$3.25	\$0.00	\$67.05
3	65.00	\$37.91	\$15.55	\$13.25	\$3.25	\$0.00	\$69.96
4	70.00	\$40.83	\$15.55	\$13.25	\$3.25	\$0.00	\$72.88
5	75.00	\$43.75	\$15.55	\$13.25	\$3.25	\$0.00	\$75.80
6	80.00	\$46.66	\$15.55	\$13.25	\$3.25	\$0.00	\$78.71
7	85.00	\$49.58	\$15.55	\$13.25	\$3.25	\$0.00	\$81.63
8	90.00	\$52.50	\$15.55	\$13.25	\$3.25	\$0.00	\$84.55

HVAC (DUCTWORK)	2/1/2025	\$59.13	\$14.91	\$18.74	\$9.53	\$2.98	\$105.29
SHEETMETAL WORKERS LOCAL 17	8/1/2025	\$60.98	\$14.91	\$18.74	\$9.53	\$2.98	\$107.14
	2/1/2026	\$62.93	\$14.91	\$18.74	\$9.53	\$2.98	\$109.09

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS)	9/1/2024	\$50.02	\$12.00	\$14.22	\$3.50	\$0.00	\$79.74
ELECTRICIANS LOCAL 223	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11
	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR)	2/1/2025	\$59.13	\$14.91	\$18.74	\$9.53	\$2.98	\$105.29
SHEETMETAL WORKERS LOCAL 17	8/1/2025	\$60.98	\$14.91	\$18.74	\$9.53	\$2.98	\$107.14
	2/1/2026	\$62.93	\$14.91	\$18.74	\$9.53	\$2.98	\$109.09

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING - WATER)	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
HVAC MECHANIC	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

HYDRAULIC DRILLS LABORERS	12/1/2024	\$39.70	\$9.90	\$9.25	\$9.11	\$0.00	\$67.96
	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.11	\$0.00	\$69.35
	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.11	\$0.00	\$70.73
	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.11	\$0.00	\$72.17
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.80	\$9.90	\$9.25	\$9.11	\$0.00	\$75.06
	12/1/2027	\$48.25	\$9.90	\$9.25	\$9.11	\$0.00	\$76.51
	6/1/2028	\$49.75	\$9.90	\$9.25	\$9.11	\$0.00	\$78.01
	12/1/2028	\$51.25	\$9.90	\$9.25	\$9.11	\$0.00	\$79.51

For apprentice rates see "Apprentice- LABORER"

HYDRAULIC DRILLS (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.70	\$9.90	\$9.25	\$9.21	\$0.00	\$68.06
	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.21	\$0.00	\$69.45
	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.21	\$0.00	\$70.83
	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.21	\$0.00	\$73.71

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6	9/1/2024	\$51.23	\$14.75	\$9.52	\$10.09	\$0.00	\$85.59
	9/1/2025	\$54.31	\$14.75	\$9.52	\$10.09	\$0.00	\$88.67
	9/1/2026	\$57.38	\$14.75	\$9.52	\$10.09	\$0.00	\$91.74

Apprentice: INSULATOR (PIPES & TANKS)**Effective Date: 9/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$25.62	\$14.75	\$9.27	\$5.05	\$0.00	\$54.69
2	60.00	\$30.74	\$14.75	\$9.32	\$6.05	\$0.00	\$60.86
3	70.00	\$35.86	\$14.75	\$9.37	\$7.06	\$0.00	\$67.04
4	80.00	\$40.98	\$14.75	\$9.42	\$8.07	\$0.00	\$73.22

Apprentice: INSULATOR (PIPES & TANKS)**Effective Date: 9/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$27.16	\$14.75	\$9.27	\$5.05	\$0.00	\$56.23
2	60.00	\$32.59	\$14.75	\$9.32	\$6.05	\$0.00	\$62.71
3	70.00	\$38.02	\$14.75	\$9.37	\$7.06	\$0.00	\$69.20
4	80.00	\$43.45	\$14.75	\$9.42	\$8.07	\$0.00	\$75.69

IRONWORKER/WELDER IRONWORKERS LOCAL 37	3/16/2021	\$42.46	\$7.70	\$12.10	\$5.00	\$0.00	\$67.26
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Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: IRONWORKER/WELDER							
Effective Date: 3/16/2021							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	70.00	\$29.72	\$7.70	\$12.10	\$5.00	\$0.00	\$54.52
2	75.00	\$31.85	\$7.70	\$12.10	\$5.00	\$0.00	\$56.65
3	80.00	\$33.97	\$7.70	\$12.10	\$5.00	\$0.00	\$58.77
4	85.00	\$36.09	\$7.70	\$12.10	\$5.00	\$0.00	\$60.89
5	90.00	\$38.21	\$7.70	\$12.10	\$5.00	\$0.00	\$63.01
6	95.00	\$40.34	\$7.70	\$12.10	\$5.00	\$0.00	\$65.14
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JACKHAMMER & PAVING BREAKER OPERATOR LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
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LABORER LABORERS	12/1/2024	\$38.95	\$9.90	\$9.25	\$9.11	\$0.00	\$67.21
	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60
	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76
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Apprentice: LABORER							
Effective Date: 12/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$23.37	\$9.90	\$9.25	\$9.11	\$0.00	\$51.63
2	70.00	\$27.27	\$9.90	\$9.25	\$9.11	\$0.00	\$55.53
3	80.00	\$31.16	\$9.90	\$9.25	\$9.11	\$0.00	\$59.42
4	90.00	\$35.06	\$9.90	\$9.25	\$9.11	\$0.00	\$63.32
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Apprentice: LABORER							
Effective Date: 6/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: LABORER Effective Date: 6/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$24.20	\$9.90	\$9.25	\$9.11	\$0.00	\$52.46
2	70.00	\$28.24	\$9.90	\$9.25	\$9.11	\$0.00	\$56.50
3	80.00	\$32.27	\$9.90	\$9.25	\$9.11	\$0.00	\$60.53
4	90.00	\$36.31	\$9.90	\$9.25	\$9.11	\$0.00	\$64.57
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LABORER (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$38.95	\$9.90	\$9.25	\$9.21	\$0.00	\$67.31
	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.21	\$0.00	\$68.70
	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.21	\$0.00	\$70.08
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.21	\$0.00	\$71.52
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.21	\$0.00	\$72.96
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Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 12/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$23.37	\$9.90	\$9.25	\$9.21	\$0.00	\$51.73
2	70.00	\$27.27	\$9.90	\$9.25	\$9.21	\$0.00	\$55.63
3	80.00	\$31.16	\$9.90	\$9.25	\$9.21	\$0.00	\$59.52
4	90.00	\$35.06	\$9.90	\$9.25	\$9.21	\$0.00	\$63.42
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Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 6/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$24.20	\$9.90	\$9.25	\$9.21	\$0.00	\$52.56
2	70.00	\$28.24	\$9.90	\$9.25	\$9.21	\$0.00	\$56.60
3	80.00	\$32.27	\$9.90	\$9.25	\$9.21	\$0.00	\$60.63
4	90.00	\$36.31	\$9.90	\$9.25	\$9.21	\$0.00	\$64.67
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LABORER: CARPENTER TENDER LABORERS	12/1/2024	\$38.95	\$9.90	\$9.25	\$9.11	\$0.00	\$67.21
	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60
	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76
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For apprentice rates see "Apprentice- LABORER"							
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LABORER: CEMENT FINISHER TENDER LABORERS	12/1/2024	\$38.95	\$9.90	\$9.25	\$9.11	\$0.00	\$67.21
	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS	12/2/2024	\$39.04	\$9.90	\$9.25	\$9.17	\$0.00	\$67.36
	6/2/2025	\$40.43	\$9.90	\$9.25	\$9.17	\$0.00	\$68.75
	12/1/2025	\$41.81	\$9.90	\$9.25	\$9.17	\$0.00	\$70.13
	6/1/2026	\$43.25	\$9.90	\$9.25	\$9.17	\$0.00	\$71.57
	12/7/2026	\$44.69	\$9.90	\$9.25	\$9.17	\$0.00	\$73.01
	6/7/2027	\$46.14	\$9.90	\$9.25	\$9.17	\$0.00	\$74.46
	12/6/2027	\$47.59	\$9.90	\$9.25	\$9.17	\$0.00	\$75.91
	6/5/2028	\$49.09	\$9.90	\$9.25	\$9.17	\$0.00	\$77.41
	12/4/2028	\$50.59	\$9.90	\$9.25	\$9.17	\$0.00	\$78.91
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.21	\$0.00	\$67.56
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
LABORER: MULTI-TRADE TENDER LABORERS	12/1/2024	\$38.95	\$9.90	\$9.25	\$9.11	\$0.00	\$67.21
	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60
	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS	12/1/2024	\$38.95	\$9.90	\$9.25	\$9.11	\$0.00	\$67.21
	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76

This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"

LASER BEAM OPERATOR LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

LASER BEAM OPERATOR (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.21	\$0.00	\$67.56
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3	2/1/2025	\$50.36	\$11.49	\$15.57	\$6.05	\$0.00	\$83.47
	8/1/2025	\$52.08	\$11.49	\$15.57	\$6.05	\$0.00	\$85.19
	2/1/2026	\$53.16	\$11.49	\$15.57	\$6.05	\$0.00	\$86.27
	8/1/2026	\$54.92	\$11.49	\$15.57	\$6.05	\$0.00	\$88.03
	2/1/2027	\$56.04	\$11.49	\$15.57	\$6.05	\$0.00	\$89.15

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$25.18	\$11.49	\$15.57	\$6.05	\$0.00	\$58.29
2	60.00	\$30.22	\$11.49	\$15.57	\$6.05	\$0.00	\$63.33
3	70.00	\$35.25	\$11.49	\$15.57	\$6.05	\$0.00	\$68.36
4	80.00	\$40.29	\$11.49	\$15.57	\$6.05	\$0.00	\$73.40
5	90.00	\$45.32	\$11.49	\$15.57	\$6.05	\$0.00	\$78.43

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MARBLE & TILE FINISHERS							
Effective Date: 8/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$26.04	\$11.49	\$15.57	\$6.05	\$0.00	\$59.15
2	60.00	\$31.25	\$11.49	\$15.57	\$6.05	\$0.00	\$64.36
3	70.00	\$36.46	\$11.49	\$15.57	\$6.05	\$0.00	\$69.57
4	80.00	\$41.66	\$11.49	\$15.57	\$6.05	\$0.00	\$74.77
5	90.00	\$46.87	\$11.49	\$15.57	\$6.05	\$0.00	\$79.98
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MARBLE MASONS,TILELAYERS & TERRAZZO MECH	2/1/2025	\$65.82	\$11.49	\$15.57	\$7.99	\$0.00	\$100.87
BRICKLAYERS LOCAL 3	8/1/2025	\$67.97	\$11.49	\$15.57	\$7.99	\$0.00	\$103.02
	2/1/2026	\$69.32	\$11.49	\$15.57	\$7.99	\$0.00	\$104.37
	8/1/2026	\$71.52	\$11.49	\$15.57	\$7.99	\$0.00	\$106.57
	2/1/2027	\$72.92	\$11.49	\$15.57	\$7.99	\$0.00	\$107.97
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Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH							
Effective Date: 2/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$32.91	\$11.49	\$15.57	\$7.99	\$0.00	\$67.96
2	60.00	\$39.49	\$11.49	\$15.57	\$7.99	\$0.00	\$74.54
3	70.00	\$46.07	\$11.49	\$15.57	\$7.99	\$0.00	\$81.12
4	80.00	\$52.66	\$11.49	\$15.57	\$7.99	\$0.00	\$87.71
5	90.00	\$59.24	\$11.49	\$15.57	\$7.99	\$0.00	\$94.29
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Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH							
Effective Date: 8/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.99	\$11.49	\$15.57	\$7.99	\$0.00	\$69.04
2	60.00	\$40.78	\$11.49	\$15.57	\$7.99	\$0.00	\$75.83
3	70.00	\$47.58	\$11.49	\$15.57	\$7.99	\$0.00	\$82.63
4	80.00	\$54.38	\$11.49	\$15.57	\$7.99	\$0.00	\$89.43
5	90.00	\$61.17	\$11.49	\$15.57	\$7.99	\$0.00	\$96.22
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MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
OPERATING ENGINEERS LOCAL 4	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
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MECHANICS MAINTENANCE	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
OPERATING ENGINEERS LOCAL 4	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 2)	1/6/2025	\$45.09	\$10.08	\$11.47	\$10.00	\$0.00	\$76.64
MILLWRIGHTS LOCAL 1121	1/5/2026	\$47.42	\$10.08	\$11.47	\$10.00	\$0.00	\$78.97

Apprentice: MILLWRIGHT (Zone 2)

Effective Date: 1/6/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$24.80	\$10.08	\$0.00	\$5.50	\$0.00	\$40.38
2	65.00	\$29.31	\$10.08	\$0.00	\$6.50	\$0.00	\$45.89
3	75.00	\$33.82	\$10.08	\$11.47	\$7.50	\$0.00	\$62.87
4	85.00	\$38.33	\$10.08	\$11.47	\$8.50	\$0.00	\$68.38

Apprentice: MILLWRIGHT (Zone 2)

Effective Date: 1/5/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$26.08	\$10.08	\$0.00	\$5.50	\$0.00	\$41.66
2	65.00	\$30.82	\$10.08	\$0.00	\$6.50	\$0.00	\$47.40
3	75.00	\$35.57	\$10.08	\$11.47	\$7.50	\$0.00	\$64.62
4	85.00	\$40.31	\$10.08	\$11.47	\$8.50	\$0.00	\$70.36

MORTAR MIXER LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/1/2024	\$25.37	\$15.30	\$13.15	\$3.25	\$0.00	\$57.07
	6/1/2025	\$25.97	\$15.30	\$13.15	\$3.25	\$0.00	\$57.67
	12/1/2025	\$26.63	\$15.30	\$13.15	\$3.25	\$0.00	\$58.33
	6/1/2026	\$27.22	\$15.30	\$13.15	\$3.25	\$0.00	\$58.92
	12/1/2026	\$27.89	\$15.30	\$13.15	\$3.25	\$0.00	\$59.59

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/1/2024	\$31.08	\$15.30	\$13.15	\$3.25	\$0.00	\$62.78
	6/1/2025	\$31.80	\$15.30	\$13.15	\$3.25	\$0.00	\$63.50
	12/1/2025	\$32.60	\$15.30	\$13.15	\$3.25	\$0.00	\$64.30
	6/1/2026	\$33.32	\$15.30	\$13.15	\$3.25	\$0.00	\$65.02

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2026	\$34.12	\$15.30	\$13.15	\$3.25	\$0.00	\$65.82

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
OPERATING ENGINEERS LOCAL 4	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS)	1/1/2025	\$58.46	\$9.95	\$11.85	\$12.10	\$0.00	\$92.36
PAINTERS LOCAL 35							

Apprentice: PAINTER (BRIDGES/TANKS)**Effective Date: 1/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.23	\$9.95	\$0.00	\$0.00	\$0.00	\$39.18
2	55.00	\$32.15	\$9.95	\$0.00	\$6.66	\$0.00	\$48.76
3	60.00	\$35.08	\$9.95	\$0.00	\$7.26	\$0.00	\$52.29
4	65.00	\$38.00	\$9.95	\$0.00	\$7.87	\$0.00	\$55.82
5	70.00	\$40.92	\$9.95	\$11.85	\$8.47	\$0.00	\$71.19
6	75.00	\$43.85	\$9.95	\$11.85	\$9.08	\$0.00	\$74.73
7	80.00	\$46.77	\$9.95	\$11.85	\$9.68	\$0.00	\$78.25
8	90.00	\$52.61	\$9.95	\$11.85	\$10.89	\$0.00	\$85.30

PAINTER (SPRAY OR SANDBLAST, NEW) *	1/1/2025	\$49.36	\$9.95	\$11.85	\$12.10	\$0.00	\$83.26
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* If 30% or more of surfaces to be painted are new construction,

NEW paint rate shall be used.

PAINTERS LOCAL 35

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) ***Effective Date: 1/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.68	\$9.95	\$0.00	\$0.00	\$0.00	\$34.63
2	55.00	\$27.15	\$9.95	\$0.00	\$6.66	\$0.00	\$43.76
3	60.00	\$29.62	\$9.95	\$0.00	\$7.26	\$0.00	\$46.83
4	65.00	\$32.08	\$9.95	\$0.00	\$7.87	\$0.00	\$49.90
5	70.00	\$34.55	\$9.95	\$11.85	\$8.47	\$0.00	\$64.82
6	75.00	\$37.02	\$9.95	\$11.85	\$9.08	\$0.00	\$67.90
7	80.00	\$39.49	\$9.95	\$11.85	\$9.68	\$0.00	\$70.97
8	90.00	\$44.42	\$9.95	\$11.85	\$10.89	\$0.00	\$77.11

PAINTER (SPRAY OR SANDBLAST, REPAINT)	1/1/2025	\$47.42	\$9.95	\$11.85	\$12.10	\$0.00	\$81.32
PAINTERS LOCAL 35							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)

Effective Date: 1/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.71	\$9.95	\$0.00	\$0.00	\$0.00	\$33.66
2	55.00	\$26.08	\$9.95	\$0.00	\$6.66	\$0.00	\$42.69
3	60.00	\$28.45	\$9.95	\$0.00	\$7.26	\$0.00	\$45.66
4	65.00	\$30.82	\$9.95	\$0.00	\$7.87	\$0.00	\$48.64
5	70.00	\$33.19	\$9.95	\$11.85	\$8.47	\$0.00	\$63.46
6	75.00	\$35.57	\$9.95	\$11.85	\$9.08	\$0.00	\$66.45
7	80.00	\$37.94	\$9.95	\$11.85	\$9.68	\$0.00	\$69.42
8	90.00	\$42.68	\$9.95	\$11.85	\$10.89	\$0.00	\$75.37

PAINTER / TAPER (BRUSH, NEW) *

1/1/2025

\$47.96

\$9.95

\$11.85

\$12.10

\$0.00

\$81.86

* If 30% or more of surfaces to be painted are new construction,
NEW paint rate shall be used.

PAINTERS LOCAL 35

Apprentice: PAINTER / TAPER (BRUSH, NEW) *

Effective Date: 1/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.98	\$9.95	\$0.00	\$0.00	\$0.00	\$33.93
2	55.00	\$26.38	\$9.95	\$0.00	\$6.66	\$0.00	\$42.99
3	60.00	\$28.78	\$9.95	\$0.00	\$7.26	\$0.00	\$45.99
4	65.00	\$31.17	\$9.95	\$0.00	\$7.87	\$0.00	\$48.99
5	70.00	\$33.57	\$9.95	\$11.85	\$8.47	\$0.00	\$63.84
6	75.00	\$35.97	\$9.95	\$11.85	\$9.08	\$0.00	\$66.85
7	80.00	\$38.37	\$9.95	\$11.85	\$9.68	\$0.00	\$69.85
8	90.00	\$43.16	\$9.95	\$11.85	\$10.89	\$0.00	\$75.85

PAINTER / TAPER (BRUSH, REPAINT)

1/1/2025

\$46.02

\$9.95

\$11.85

\$12.10

\$0.00

\$79.92

PAINTERS LOCAL 35

Apprentice: PAINTER / TAPER (BRUSH, REPAINT)

Effective Date: 1/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.01	\$9.95	\$0.00	\$0.00	\$0.00	\$32.96
2	55.00	\$25.31	\$9.95	\$0.00	\$6.66	\$0.00	\$41.92
3	60.00	\$27.61	\$9.95	\$0.00	\$7.26	\$0.00	\$44.82
4	65.00	\$29.91	\$9.95	\$0.00	\$7.87	\$0.00	\$47.73
5	70.00	\$32.21	\$9.95	\$11.85	\$8.47	\$0.00	\$62.48
6	75.00	\$34.52	\$9.95	\$11.85	\$9.08	\$0.00	\$65.40
7	80.00	\$36.82	\$9.95	\$11.85	\$9.68	\$0.00	\$68.30

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																								
<div>Apprentice: PAINTER / TAPER (BRUSH, REPAINT)</div> <div>Effective Date: 1/1/2025</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>8</td><td>90.00</td><td>\$41.42</td><td>\$9.95</td><td>\$11.85</td><td>\$10.89</td><td>\$0.00</td><td>\$74.11</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	8	90.00	\$41.42	\$9.95	\$11.85	\$10.89	\$0.00	\$74.11																								
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																								
8	90.00	\$41.42	\$9.95	\$11.85	\$10.89	\$0.00	\$74.11																																								
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) LABORERS	12/1/2024	\$38.95	\$9.90	\$9.25	\$9.21	\$0.00	\$67.31																																								
	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.21	\$0.00	\$68.70																																								
	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.21	\$0.00	\$70.08																																								
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.21	\$0.00	\$71.52																																								
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.21	\$0.00	\$72.96																																								
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)																																															
PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10	1/1/2025	\$39.78	\$15.57	\$20.17	\$0.00	\$0.00	\$75.52																																								
	6/1/2025	\$40.78	\$15.57	\$20.17	\$0.00	\$0.00	\$76.52																																								
	12/1/2025	\$40.78	\$15.57	\$21.78	\$0.00	\$0.00	\$78.13																																								
	1/1/2026	\$40.78	\$16.17	\$21.78	\$0.00	\$0.00	\$78.73																																								
	6/1/2026	\$41.78	\$16.17	\$21.78	\$0.00	\$0.00	\$79.73																																								
	12/1/2026	\$41.78	\$16.17	\$23.52	\$0.00	\$0.00	\$81.47																																								
	1/1/2027	\$41.78	\$16.77	\$23.52	\$0.00	\$0.00	\$82.07																																								
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	8/1/2024	\$55.79	\$10.08	\$11.62	\$12.67	\$0.00	\$90.16																																								
PILE DRIVER LOCAL 56																																															
For apprentice rates see "Apprentice- PILE DRIVER"																																															
PILE DRIVER	8/1/2024	\$55.79	\$10.08	\$11.62	\$12.67	\$0.00	\$90.16																																								
PILE DRIVER LOCAL 56																																															
<div>Apprentice: PILE DRIVER</div> <div>Effective Date: 8/1/2024</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>1</td><td>45.00</td><td>\$25.11</td><td>\$10.08</td><td>\$0.00</td><td>\$2.53</td><td>\$0.00</td><td>\$37.72</td></tr><tr><td>2</td><td>55.00</td><td>\$30.68</td><td>\$10.08</td><td>\$0.00</td><td>\$5.07</td><td>\$0.00</td><td>\$45.83</td></tr><tr><td>3</td><td>70.00</td><td>\$39.05</td><td>\$10.08</td><td>\$11.62</td><td>\$7.60</td><td>\$0.00</td><td>\$68.35</td></tr><tr><td>4</td><td>80.00</td><td>\$44.63</td><td>\$10.08</td><td>\$11.62</td><td>\$10.14</td><td>\$0.00</td><td>\$76.47</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	1	45.00	\$25.11	\$10.08	\$0.00	\$2.53	\$0.00	\$37.72	2	55.00	\$30.68	\$10.08	\$0.00	\$5.07	\$0.00	\$45.83	3	70.00	\$39.05	\$10.08	\$11.62	\$7.60	\$0.00	\$68.35	4	80.00	\$44.63	\$10.08	\$11.62	\$10.14	\$0.00	\$76.47
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																								
1	45.00	\$25.11	\$10.08	\$0.00	\$2.53	\$0.00	\$37.72																																								
2	55.00	\$30.68	\$10.08	\$0.00	\$5.07	\$0.00	\$45.83																																								
3	70.00	\$39.05	\$10.08	\$11.62	\$7.60	\$0.00	\$68.35																																								
4	80.00	\$44.63	\$10.08	\$11.62	\$10.14	\$0.00	\$76.47																																								
PIPELAYER LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46																																								
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85																																								
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23																																								
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67																																								
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11																																								
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56																																								
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01																																								
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51																																								
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01																																								

For apprentice rates see "Apprentice- LABORER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PIPELAYER (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.21	\$0.00	\$67.56
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

PLUMBER & PIPEFITTER	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44

Apprentice: PLUMBER & PIPEFITTER**Effective Date: 8/26/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$21.00	\$10.15	\$2.50	\$0.00	\$0.00	\$33.65
2	50.00	\$26.25	\$10.15	\$2.50	\$0.00	\$0.00	\$38.90
3	60.00	\$31.49	\$10.15	\$8.40	\$0.50	\$0.00	\$50.54
4	70.00	\$36.74	\$10.15	\$13.44	\$0.80	\$0.00	\$61.13
5	80.00	\$41.99	\$10.15	\$16.80	\$1.00	\$0.00	\$69.94

Apprentice: PLUMBER & PIPEFITTER**Effective Date: 8/25/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$22.10	\$10.15	\$2.50	\$0.00	\$0.00	\$34.75
2	50.00	\$27.62	\$10.15	\$2.50	\$0.00	\$0.00	\$40.27
3	60.00	\$33.14	\$10.15	\$8.40	\$0.50	\$0.00	\$52.19
4	70.00	\$38.67	\$10.15	\$13.44	\$0.80	\$0.00	\$63.06
5	80.00	\$44.19	\$10.15	\$16.80	\$1.00	\$0.00	\$72.14

PNEUMATIC CONTROLS (TEMP.)	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

PNEUMATIC DRILL/TOOL OPERATOR LABORERS	12/1/2024	\$39.70	\$9.90	\$9.25	\$8.29	\$0.00	\$67.14
	6/1/2025	\$41.09	\$9.90	\$9.25	\$8.29	\$0.00	\$68.53
	12/1/2025	\$42.47	\$9.90	\$9.25	\$8.29	\$0.00	\$69.91
	6/1/2026	\$43.91	\$9.90	\$9.25	\$8.29	\$0.00	\$71.35
	12/1/2026	\$45.35	\$9.90	\$9.25	\$8.29	\$0.00	\$72.79
	6/1/2027	\$46.80	\$9.90	\$9.25	\$8.29	\$0.00	\$74.24
	12/1/2027	\$48.25	\$9.90	\$9.25	\$8.29	\$0.00	\$75.69
	6/1/2028	\$49.75	\$9.90	\$9.25	\$8.29	\$0.00	\$77.19
	12/1/2028	\$51.25	\$9.90	\$9.25	\$8.29	\$0.00	\$78.69

For apprentice rates see "Apprentice- LABORER"

PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.21	\$0.00	\$67.56
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
POWDERMAN & BLASTER LABORERS	12/1/2024	\$39.95	\$9.90	\$9.25	\$9.11	\$0.00	\$68.21
	6/1/2025	\$41.34	\$9.90	\$9.25	\$9.11	\$0.00	\$69.60
	12/1/2025	\$42.72	\$9.90	\$9.25	\$9.11	\$0.00	\$70.98
	6/1/2026	\$44.16	\$9.90	\$9.25	\$9.11	\$0.00	\$72.42
	12/1/2026	\$45.60	\$9.90	\$9.25	\$9.11	\$0.00	\$73.86
	6/1/2027	\$47.05	\$9.90	\$9.25	\$9.11	\$0.00	\$75.31
	12/1/2027	\$48.50	\$9.90	\$9.25	\$9.11	\$0.00	\$76.76
	6/1/2028	\$50.00	\$9.90	\$9.25	\$9.11	\$0.00	\$78.26
	12/1/2028	\$51.50	\$9.90	\$9.25	\$9.11	\$0.00	\$79.76
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.95	\$9.65	\$9.25	\$9.21	\$0.00	\$68.06
	6/1/2025	\$41.34	\$9.65	\$9.25	\$9.21	\$0.00	\$69.45
	12/1/2025	\$42.72	\$9.65	\$9.25	\$9.21	\$0.00	\$70.83
	6/1/2026	\$44.16	\$9.65	\$9.25	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.60	\$9.65	\$9.25	\$9.21	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
POWER SHOVEL/DERRICK/TRENCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/1/2024	\$57.03	\$15.55	\$13.25	\$3.25	\$0.00	\$89.08
	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE) OPERATING ENGINEERS LOCAL 4	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER) OPERATING ENGINEERS LOCAL 4	12/1/2024	\$36.67	\$15.55	\$13.25	\$3.25	\$0.00	\$68.72
	6/1/2025	\$37.52	\$15.55	\$13.25	\$3.25	\$0.00	\$69.57
	12/1/2025	\$38.47	\$15.55	\$13.25	\$3.25	\$0.00	\$70.52
	6/1/2026	\$39.33	\$15.55	\$13.25	\$3.25	\$0.00	\$71.38
	12/1/2026	\$40.28	\$15.55	\$13.25	\$3.25	\$0.00	\$72.33
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER TEAMSTERS 170	1/1/2025	\$27.60	\$11.26	\$6.15	\$0.00	\$0.00	\$45.01
RECLAIMERS OPERATING ENGINEERS LOCAL 4	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

RIDE-ON MOTORIZED BUGGY OPERATOR LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.11	\$0.00	\$67.46
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

ROLLER/SPREADER/MULCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg) ROOFERS LOCAL 33	2/1/2025	\$52.03	\$13.28	\$12.67	\$9.03	\$0.00	\$87.01
	8/1/2025	\$53.53	\$13.28	\$12.67	\$9.03	\$0.00	\$88.51
	2/1/2026	\$54.78	\$13.28	\$12.67	\$9.03	\$0.00	\$89.76

Apprentice: ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg)

Effective Date: 2/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$26.02	\$13.28	\$6.52	\$9.03	\$0.00	\$54.85
2	60.00	\$31.22	\$13.28	\$12.67	\$9.03	\$0.00	\$66.20
3	65.00	\$33.82	\$13.28	\$12.67	\$9.03	\$0.00	\$68.80
4	75.00	\$39.02	\$13.28	\$12.67	\$9.03	\$0.00	\$74.00
5	85.00	\$44.23	\$13.28	\$12.67	\$9.03	\$0.00	\$79.21

Apprentice: ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg)

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$26.77	\$13.28	\$6.52	\$9.03	\$0.00	\$55.60
2	60.00	\$32.12	\$13.28	\$12.67	\$9.03	\$0.00	\$67.10
3	65.00	\$34.79	\$13.28	\$12.67	\$9.03	\$0.00	\$69.77
4	75.00	\$40.15	\$13.28	\$12.67	\$9.03	\$0.00	\$75.13
5	85.00	\$45.50	\$13.28	\$12.67	\$9.03	\$0.00	\$80.48

ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 33	2/1/2025	\$52.28	\$13.28	\$12.67	\$9.03	\$0.00	\$87.26
	8/1/2025	\$53.78	\$13.28	\$12.67	\$9.03	\$0.00	\$88.76

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	2/1/2026	\$55.03	\$13.28	\$12.67	\$9.03	\$0.00	\$90.01

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER	2/1/2025	\$59.13	\$14.91	\$18.74	\$9.53	\$2.98	\$105.29
SHEETMETAL WORKERS LOCAL 17	8/1/2025	\$60.98	\$14.91	\$18.74	\$9.53	\$2.98	\$107.14
	2/1/2026	\$62.93	\$14.91	\$18.74	\$9.53	\$2.98	\$109.09

Apprentice: SHEETMETAL WORKER

Effective Date: 2/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	42.00	\$24.83	\$14.91	\$6.13	\$0.00	\$0.00	\$45.87
2	42.00	\$24.83	\$14.91	\$6.13	\$0.00	\$0.00	\$45.87
3	47.00	\$27.79	\$14.91	\$11.01	\$1.25	\$1.62	\$56.58
4	47.00	\$27.79	\$14.91	\$11.01	\$1.25	\$1.62	\$56.58
5	52.00	\$30.75	\$14.91	\$11.74	\$1.50	\$1.74	\$60.64
6	52.00	\$30.75	\$14.91	\$11.74	\$1.75	\$1.75	\$60.90
7	60.00	\$35.48	\$14.91	\$12.90	\$2.00	\$1.93	\$67.22
8	65.00	\$38.43	\$14.91	\$13.63	\$2.25	\$2.04	\$71.26
9	75.00	\$44.35	\$14.91	\$15.09	\$2.75	\$2.28	\$79.38
10	85.00	\$50.26	\$14.91	\$16.55	\$2.75	\$2.49	\$86.96

Apprentice: SHEETMETAL WORKER

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	42.00	\$25.61	\$14.91	\$6.13	\$0.00	\$0.00	\$46.65
2	42.00	\$25.61	\$14.91	\$6.13	\$0.00	\$0.00	\$46.65
3	47.00	\$28.66	\$14.91	\$11.01	\$1.25	\$1.62	\$57.45
4	47.00	\$28.66	\$14.91	\$11.01	\$1.25	\$1.62	\$57.45
5	52.00	\$31.71	\$14.91	\$11.74	\$1.50	\$1.74	\$61.60
6	52.00	\$31.71	\$14.91	\$11.74	\$1.75	\$1.75	\$61.86
7	60.00	\$36.59	\$14.91	\$12.90	\$2.00	\$1.93	\$68.33
8	65.00	\$39.64	\$14.91	\$13.63	\$2.25	\$2.04	\$72.47
9	75.00	\$45.74	\$14.91	\$15.09	\$2.75	\$2.28	\$80.77
10	85.00	\$51.83	\$14.91	\$16.55	\$2.75	\$2.49	\$88.53

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10	1/1/2025	\$40.24	\$15.57	\$20.17	\$0.00	\$0.00	\$75.98
	6/1/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$0.00	\$76.98
	12/1/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$0.00	\$78.59
	1/1/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$0.00	\$79.19
	6/1/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$0.00	\$80.19
	12/1/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$0.00	\$81.93
	1/1/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$0.00	\$82.53

SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10	1/1/2025	\$40.53	\$15.57	\$20.17	\$0.00	\$0.00	\$76.27
	6/1/2025	\$41.53	\$15.57	\$20.17	\$0.00	\$0.00	\$77.27

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2025	\$41.53	\$15.57	\$21.78	\$0.00	\$0.00	\$78.88
	1/1/2026	\$41.53	\$16.17	\$21.78	\$0.00	\$0.00	\$79.48
	6/1/2026	\$42.53	\$16.17	\$21.78	\$0.00	\$0.00	\$80.48
	12/1/2026	\$42.53	\$16.17	\$23.52	\$0.00	\$0.00	\$82.22
	1/1/2027	\$42.53	\$16.77	\$23.52	\$0.00	\$0.00	\$82.82
SPRINKLER FITTER SPRINKLER FITTERS LOCAL 550	3/1/2025	\$72.14	\$11.51	\$7.30	\$16.50	\$0.00	\$107.45

Apprentice: SPRINKLER FITTER**Effective Date: 3/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	\$25.25	\$11.51	\$13.07	\$0.00	\$0.00	\$49.83
2	40.00	\$28.86	\$11.51	\$13.90	\$0.00	\$0.00	\$54.27
3	45.00	\$32.46	\$11.51	\$14.73	\$0.00	\$0.00	\$58.70
4	50.00	\$36.07	\$11.51	\$15.55	\$0.00	\$0.00	\$63.13
5	55.00	\$39.68	\$11.51	\$16.37	\$0.00	\$0.00	\$67.56
6	60.00	\$43.28	\$11.51	\$17.20	\$0.00	\$0.00	\$71.99
7	65.00	\$46.89	\$11.51	\$18.03	\$0.00	\$0.00	\$76.43
8	70.00	\$50.50	\$11.51	\$18.85	\$0.00	\$0.00	\$80.86
9	75.00	\$54.11	\$11.51	\$19.67	\$0.00	\$0.00	\$85.29
10	80.00	\$57.71	\$11.51	\$20.50	\$0.00	\$0.00	\$89.72

STEAM BOILER OPERATOR OPERATING ENGINEERS LOCAL 4	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN OPERATING ENGINEERS LOCAL 4	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TELECOMMUNICATION TECHNICIAN ELECTRICIANS LOCAL 223	9/1/2024	\$40.69	\$11.75	\$11.53	\$3.00	\$0.00	\$66.97
	9/1/2025	\$42.52	\$12.00	\$12.05	\$3.25	\$0.00	\$69.82
	9/1/2026	\$44.41	\$12.25	\$12.59	\$3.50	\$0.00	\$72.75
	9/1/2027	\$46.51	\$12.50	\$13.18	\$3.75	\$0.00	\$75.94

Apprentice: TELECOMMUNICATION TECHNICIAN**Effective Date: 9/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: TELECOMMUNICATION TECHNICIAN Effective Date: 9/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
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TERRAZZO FINISHERS BRICKLAYERS LOCAL 3	2/1/2025	\$64.74	\$11.49	\$15.57	\$8.02	\$0.00	\$99.82
	8/1/2025	\$66.89	\$11.49	\$15.57	\$8.02	\$0.00	\$101.97
	2/1/2026	\$68.24	\$11.49	\$15.57	\$8.02	\$0.00	\$103.32
	8/1/2026	\$70.44	\$11.49	\$15.57	\$8.02	\$0.00	\$105.52
	2/1/2027	\$71.84	\$11.49	\$15.57	\$8.02	\$0.00	\$106.92
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Apprentice: TERRAZZO FINISHERS Effective Date: 2/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$32.37	\$11.49	\$15.57	\$8.02	\$0.00	\$67.45
2	60.00	\$38.84	\$11.49	\$15.57	\$8.02	\$0.00	\$73.92
3	70.00	\$45.32	\$11.49	\$15.57	\$8.02	\$0.00	\$80.40
4	80.00	\$51.79	\$11.49	\$15.57	\$8.02	\$0.00	\$86.87
5	90.00	\$58.27	\$11.49	\$15.57	\$8.02	\$0.00	\$93.35
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Apprentice: TERRAZZO FINISHERS Effective Date: 8/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.45	\$11.49	\$15.57	\$8.02	\$0.00	\$68.53
2	60.00	\$40.13	\$11.49	\$15.57	\$8.02	\$0.00	\$75.21
3	70.00	\$46.82	\$11.49	\$15.57	\$8.02	\$0.00	\$81.90
4	80.00	\$53.51	\$11.49	\$15.57	\$8.02	\$0.00	\$88.59
5	90.00	\$60.20	\$11.49	\$15.57	\$8.02	\$0.00	\$95.28
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TEST BORING DRILLER LABORERS	12/1/2024	\$50.20	\$9.90	\$9.25	\$9.80	\$0.00	\$79.15
	6/1/2025	\$51.70	\$9.90	\$9.25	\$9.80	\$0.00	\$80.65
	12/1/2025	\$53.20	\$9.90	\$9.25	\$9.80	\$0.00	\$82.15
	6/1/2026	\$54.75	\$9.90	\$9.25	\$9.80	\$0.00	\$83.70
	12/1/2026	\$56.25	\$9.90	\$9.25	\$9.80	\$0.00	\$85.20
For apprentice rates see "Apprentice- LABORER"							
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TEST BORING DRILLER HELPER LABORERS	12/1/2024	\$46.32	\$9.90	\$9.25	\$9.80	\$0.00	\$75.27
	6/1/2025	\$47.82	\$9.90	\$9.25	\$9.80	\$0.00	\$76.77
	12/1/2025	\$49.32	\$9.90	\$9.25	\$9.80	\$0.00	\$78.27
	6/1/2026	\$50.87	\$9.90	\$9.25	\$9.80	\$0.00	\$79.82
	12/1/2026	\$52.37	\$9.90	\$9.25	\$9.80	\$0.00	\$81.32
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TEST BORING LABORER LABORERS	12/1/2024	\$46.20	\$9.90	\$9.25	\$9.80	\$0.00	\$75.15
	6/1/2025	\$47.70	\$9.90	\$9.25	\$9.80	\$0.00	\$76.65
	12/1/2025	\$49.20	\$9.90	\$9.25	\$9.80	\$0.00	\$78.15
	6/1/2026	\$50.75	\$9.90	\$9.25	\$9.80	\$0.00	\$79.70
	12/1/2026	\$52.25	\$9.90	\$9.25	\$9.80	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS/PORTABLE STEAM GENERATORS OPERATING ENGINEERS LOCAL 4	12/1/2024	\$56.40	\$15.55	\$13.25	\$3.25	\$0.00	\$88.45
	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10	1/1/2025	\$40.82	\$15.57	\$20.17	\$0.00	\$0.00	\$76.56
	6/1/2025	\$41.82	\$15.57	\$20.17	\$0.00	\$0.00	\$77.56
	12/1/2025	\$41.82	\$15.57	\$21.78	\$0.00	\$0.00	\$79.17
	1/1/2026	\$41.82	\$16.17	\$21.78	\$0.00	\$0.00	\$79.77
	6/1/2026	\$42.82	\$16.17	\$21.78	\$0.00	\$0.00	\$80.77
	12/1/2026	\$42.82	\$16.17	\$23.52	\$0.00	\$0.00	\$82.51
	1/1/2027	\$42.82	\$16.77	\$23.52	\$0.00	\$0.00	\$83.11
TUNNEL WORK - COMPRESSED AIR LABORERS	12/1/2024	\$58.43	\$9.90	\$9.25	\$10.25	\$0.00	\$87.83
	6/1/2025	\$59.93	\$9.90	\$9.25	\$10.25	\$0.00	\$89.33
	12/1/2025	\$61.43	\$9.90	\$9.25	\$10.25	\$0.00	\$90.83
	6/1/2026	\$62.98	\$9.90	\$9.25	\$10.25	\$0.00	\$92.38
	12/1/2026	\$64.48	\$9.90	\$9.25	\$10.25	\$0.00	\$93.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) LABORERS	12/1/2024	\$60.43	\$9.90	\$9.25	\$10.25	\$0.00	\$89.83
	6/1/2025	\$61.93	\$9.90	\$9.25	\$10.25	\$0.00	\$91.33
	12/1/2025	\$63.43	\$9.90	\$9.25	\$10.25	\$0.00	\$92.83
	6/1/2026	\$64.98	\$9.90	\$9.25	\$10.25	\$0.00	\$94.38
	12/1/2026	\$66.48	\$9.90	\$9.25	\$10.25	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR LABORERS	12/1/2024	\$50.50	\$9.90	\$9.25	\$10.25	\$0.00	\$79.90
	6/1/2025	\$52.00	\$9.90	\$9.25	\$10.25	\$0.00	\$81.40
	12/1/2025	\$53.50	\$9.90	\$9.25	\$10.25	\$0.00	\$82.90
	6/1/2026	\$55.05	\$9.90	\$9.25	\$10.25	\$0.00	\$84.45
	12/1/2026	\$56.55	\$9.90	\$9.25	\$10.25	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE) LABORERS	12/1/2024	\$52.50	\$9.90	\$9.25	\$10.25	\$0.00	\$81.90
	6/1/2025	\$54.00	\$9.90	\$9.25	\$10.25	\$0.00	\$83.40
	12/1/2025	\$55.50	\$9.90	\$9.25	\$10.25	\$0.00	\$84.90
	6/1/2026	\$57.05	\$9.90	\$9.25	\$10.25	\$0.00	\$86.45
	12/1/2026	\$58.55	\$9.90	\$9.25	\$10.25	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
VAC-HAUL TEAMSTERS JOINT COUNCIL NO. 10	1/1/2025	\$40.24	\$15.57	\$20.17	\$0.00	\$0.00	\$75.98
	6/1/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$0.00	\$76.98
	12/1/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$0.00	\$78.59
	1/1/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$0.00	\$79.19
	6/1/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$0.00	\$80.19
	12/1/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$0.00	\$81.93
	1/1/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$0.00	\$82.53
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WAGON DRILL OPERATOR LABORERS	12/1/2024	\$40.61	\$9.65	\$9.00	\$8.70	\$0.00	\$67.96
	6/1/2025	\$42.00	\$9.65	\$9.00	\$8.70	\$0.00	\$69.35
	12/1/2025	\$43.38	\$9.65	\$9.00	\$8.70	\$0.00	\$70.73
	6/1/2026	\$44.82	\$9.65	\$9.00	\$8.70	\$0.00	\$72.17
	12/1/2026	\$46.26	\$9.65	\$9.00	\$8.70	\$0.00	\$73.61
	6/1/2027	\$47.71	\$9.65	\$9.00	\$8.70	\$0.00	\$75.06
	12/1/2027	\$49.16	\$9.65	\$9.00	\$8.70	\$0.00	\$76.51
	6/1/2028	\$50.66	\$9.65	\$9.00	\$8.70	\$0.00	\$78.01
	12/1/2028	\$52.16	\$9.65	\$9.00	\$8.70	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
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WAGON DRILL OPERATOR (HEAVY & HIGHWAY) LABORERS	12/1/2024	\$39.20	\$9.90	\$9.25	\$9.21	\$0.00	\$67.56
	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
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WASTE WATER PUMP OPERATOR OPERATING ENGINEERS LOCAL 4	12/1/2024	\$57.03	\$15.55	\$13.25	\$3.25	\$0.00	\$89.08
	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
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WATER METER INSTALLER PLUMBERS & PIPEFITTERS LOCAL 51	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"							

Additional Apprentice Information

All apprentices must be registered with the Division of Apprenticeship Training(DAS) in accordance with M.G.L.c. 23, §§ 11E-11L. Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the hourly prevailing wage rate established by the Commissioner under the provisions of M.G.L.c. 149, §§ 26-27D.

Apprentice ratios are established by DAS pursuant to M.G.L.c. 23, §§ 11E-11L. Ratios are expressed as the allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified. The ratios listed herein have been taken from relevant private collective bargaining agreements(CBAs) and are provided for illustrative purposes only. They have not been independently verified as being accurate or continuing to be accurate.

Parties having questions regarding what ratio to use should contact DAS.

SECTION V – FEDERAL PREVAILING WAGE RATES

Superseded General Decision Number: MA20240017

State: Massachusetts

Construction Type: Highway

County: Bristol County in Massachusetts.

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)(1).

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:	<ul style="list-style-type: none">. 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:	<ul style="list-style-type: none">. 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	Publication Date
0	01/03/2025
1	03/14/2025
2	03/21/2025

ELEC0103-003 03/01/2025

	Rates	Fringes
ELECTRICIAN (Includes Traffic Signalization).....	\$ 64.26	36.99

ENGI0004-021 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 57.03	33.20
GROUP 2.....	\$ 56.40	33.20

FOOTNOTE FOR POWER EQUIPMENT OPERATORS:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday,
Labor Day, Memorial Day, Independence Day, Patriot's Day,
Columbus Day, Veteran's Day, Thanksgiving Day, Christmas Day

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

Group 1: Backhoe/Excavator/Trackhoe; Bobcat/Skid Steer/Skid
Loader; Broom/Sweeper; Crane; Gradall; Loader; Paver
(Asphalt, Aggregate, and Concrete); Post Driver
(Guardrail/Fences)
Group 2: Bulldozer; Grader/Blade; Milling Machine; Roller

IRON0007-029 03/16/2024

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 54.68	36.48

LAB00133-001 12/01/2024

	Rates	Fringes
LABORER (Concrete Surfacers).....	\$ 46.20	29.85

LAB00385-001 12/01/2024

	Rates	Fringes
LABORER		
Common or General.....	\$ 38.95	29.41
Fence Erection.....	\$ 38.95	29.41

* LAB00721-001 12/01/2024

	Rates	Fringes
LABORER (Guardrail Installation).....	\$ 38.95	29.81

LAB00876-002 06/01/2018

	Rates	Fringes
LABORER (Landscape).....	\$ 33.25	22.92

PAIN0035-023 07/01/2024

	Rates	Fringes
PAINTER (Steel).....	\$ 56.76	36.00

SUMA2014-007 01/11/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 56.70	21.08
IRONWORKER, REINFORCING.....	\$ 42.13	18.15
IRONWORKER, STRUCTURAL.....	\$ 45.19	17.30
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 34.72	16.01
LABORER: Concrete Saw (Hand Held/Walk Behind).....	\$ 44.43	14.18
LABORER: Jack Hammer.....	\$ 35.32	18.48
OPERATOR: Forklift.....	\$ 64.67	0.00
OPERATOR: Mechanic.....	\$ 48.74	11.79
OPERATOR: Piledriver.....	\$ 42.56	17.34
PAINTER: Spray (Linestriping)....	\$ 47.30	6.42
TRAFFIC CONTROL: Flagger.....	\$ 23.00	20.44
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 53.35	12.78
TRUCK DRIVER: Concrete Truck....	\$ 33.69	15.79
TRUCK DRIVER: Dump Truck.....	\$ 39.03	12.89
TRUCK DRIVER: Flatbed Truck.....	\$ 48.53	0.00

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

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information

on contractor requirements and worker protections under the EO is available at <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) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate 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 the classification.

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.

?SU? 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) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) 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.

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END OF GENERAL DECISION"

**SECTION VI – THE COMMONWEALTH OF MASSACHUSETTS SUPPLEMENTAL EQUAL
EMPLOYMENT OPPORTUNITY (EEO) AND ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION
PROGRAM**

AFFIRMATIVE ACTION REQUIREMENTS

The Commonwealth of Massachusetts, Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program are indicated on the following pages of these Contract Documents. The Bidder must execute and submit as part of their Bid the Certification as required, and the requirements and certification shall be deemed as part of the resulting Contract.

Where federal requirements in the AIP Federal Contract Provisions in Section III of these Specifications and elsewhere in the Contract Documents and this Section conflict, the Federal provisions shall govern.

**THE COMMONWEALTH OF MASSACHUSETTS
SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY
ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM**

I. Definitions

For purposes of this contract, "Minority" means a person who meets one or more of the following definitions:

- (a) American Indian or Native American means: all persons having origins in any of the original peoples of North America and who are recognized as an Indian by a tribe or tribal organization.
- (b) Asian means: All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian sub-continent, or the Pacific Islands, including, but not limited to China, Japan, Korea, Samoa, India, and the Philippine Islands.
- (a) Black means: All persons having origins in any of the Black racial groups of Africa, including, but not limited to, African-Americans, and all persons having origins in any of the original peoples of the Cape Verdean Islands.
- (b) Eskimo or Aleut means: All persons having origins in any of the peoples of Northern Canada, Greenland, Alaska, and Eastern Siberia.
- (c) Hispanic means: All persons having their origins in any of the Spanish-speaking peoples of Mexico, Puerto Rico, Cuba, Central or South America, or the Caribbean Islands.

"State construction contract" means a contract for the construction, reconstruction, installation, demolition, maintenance or repair of a building or capital facility, or a contract for the construction, reconstruction, alteration, remodeling or repair of a public work undertaken by a department, agency, board, or commission of the commonwealth.

"State assisted construction contract" means a contract for the construction, reconstruction, installation, demolition, maintenance or repair of a building or capital facility undertaken by a political subdivision of the commonwealth, or two or more political subdivisions thereof, an authority, or other instrumentality and whose costs of the contract are paid for, reimbursed, grant funded, or otherwise supported, in whole or in part, by the commonwealth.

II. Equal Opportunity, Non-Discrimination and Affirmative Action

During the performance of this Contract, the Contractor and all subcontractors (hereinafter collectively referred to as "the Contractor") for a state construction contract or a state assisted construction contract, for him/herself, his/her assignees and successors in interest, agree to comply with all applicable equal employment opportunity, non-discrimination and affirmative action requirements, including but not limited to the following:

In connection with the performance of work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability, shall not discriminate in the selection or retention of subcontractors, and shall not discriminate in the procurement of materials and rentals of equipment.

The aforesaid provision shall include, but not be limited to, the following: employment upgrading, demotion, or transfer; recruitment advertising, layoff or termination; rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship or on-the-

job training opportunity. The Contractor shall comply with the provisions of chapter 151B of the Massachusetts General Laws, as amended, and all other applicable anti-discrimination and equal opportunity laws, all of which are herein incorporated by reference and made a part of this Contract.

The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Massachusetts Commission Against Discrimination setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (Massachusetts General Laws Chapter 151B).

In connection with the performance of work under this contract, the Contractor shall undertake, in good faith, affirmative action measures to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability. Such affirmative action measures shall entail positive and aggressive measures to ensure non-discrimination and to promote equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, apprenticeship and on-the-job training programs. A list of positive and aggressive measures shall include, but not be limited to, advertising employment opportunities in minority and other community news media; notifying minority, women and other community-based organizations of employment opportunities; validating all job specifications, selection requirements, and tests; maintaining a file of names and addresses of each worker referred to the Contractor and what action was taken concerning such worker; and notifying the administering agency in writing when a union with whom the Contractor has a collective bargaining agreement has failed to refer a minority or woman worker. These and other affirmative action measures shall include all actions required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability. One purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future Commonwealth public construction projects.

III. Minority and Women Workforce Participation

Pursuant to his/her obligations under the preceding section, the Contractor shall strive to achieve on this project the labor participation goals contained herein. Said participation goals shall apply in each job category on this project including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers and those classes of work enumerated in Section 44F of Chapter 149 of the Massachusetts General Laws. The participation goals for this project shall be 15.3% for minorities and 6.9% for women. The participation goals, as set forth herein, shall not be construed as quotas or set-asides; rather, such participation goals will be used to measure the progress of the Commonwealth's equal opportunity, non-discrimination and affirmative action program. Additionally, the participation goals contained herein should not be seen or treated as a floor or as a ceiling for the employment of particular individuals or group of individuals.

IV. Liaison Committee

At the discretion of the agency that administers the contract for the construction project there may be established for the life of the contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering the contract for the construction project, hereinafter called the administering agency, a representative from the Office of Affirmative action, and such other representatives as may be designated by the administering agency.

The Contractor (or his/her agent, if any, designated by him/her as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

V. Reports and Records

The Contractor shall prepare projected workforce tables on a quarterly basis when required by the administering agency. These shall be broken down into projections, by week, of workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and also, when updated, to the administering agency and the Liaison Committee when required.

The Contractor shall prepare weekly reports in a form approved by the administering agency, unless information required is required to be reported electronically by the administering agency, the number of hours worked in each trade by each employee, identified as woman, minority, or non-minority. Copies of these shall be provided at the end of each such week to the administering agency and the Liaison Committee.

Records of employment referral orders, prepared by the Contractor, shall be made available to the administering agency on request.

The Contractor will provide all information and reports required by the administering agency on instructions issued by the administering agency and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the administering agency to effect the employment of personnel. This provision shall apply only to information pertinent to the Commonwealth's supplementary non-discrimination, equal opportunity and access and opportunity contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering agency and shall set forth what efforts he has made to obtain the information.

VI. Access to Work Site

A designee of the administering agency and a designee of the Liaison Committee shall each have a right to access the work site.

VII. Solicitations for Subcontracts, and for the Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this contract relative to non-discrimination and equal opportunity.

VIII. Sanctions

Whenever the administering agency believes the General or Prime Contractor or any subcontractor may not be operating in compliance with the provisions of the Fair Employment Practices Law of the Commonwealth (Massachusetts General Laws Chapter 151B), the administering agency may refer the matter to the Massachusetts Commission Against Discrimination ("Commission") for investigation.

Following the referral of a matter by the administering agency to the Massachusetts Commission Against Discrimination, and while the matter is pending before the MCAD, the administering agency may withhold payments from contractors and subcontractors when it has documentation that the

contractor or subcontractor has violated the Fair Employment Practices Law with respect to its activities on the Project, or if the administering agency determines that the contractor has materially failed to comply with its obligations and the requirements of this Section. The amount withheld shall not exceed a withhold of payment to the General or Prime Contractor of 1/100 or 1% of the contract award price or \$5,000, whichever sum is greater, or, if a subcontractor is in non-compliance, a withhold by the administering agency from the General Contractor, to be assessed by the General Contractor as a charge against the subcontractor, of 1/100 or 1% of the subcontractor price, or \$1,000 whichever sum is greater, for each violation of the applicable law or contract requirements. The total withheld from any one General or Prime Contractor or subcontractor on a Project shall not exceed \$20,000 overall. No withhold of payments or investigation by the Commission or its agent shall be initiated without the administering agency providing prior notice to the Contractor.

If, after investigation, the Massachusetts Commission Against Discrimination finds that a General or Prime Contractor or subcontractor, in commission of a state construction contract or state-assisted construction contract, violated the provisions of the Fair Employment Practices Law, the administering agency may convert the amount withheld as set forth above into a permanent sanction, as a permanent deduct from payments to the General or Prime Contractor or subcontractor, which sanction will be in addition to any such sanctions, fines or penalties imposed by the Massachusetts Commission Against Discrimination:

No sanction enumerated under this Section shall be imposed by the administering agency except after notice to the General or Prime Contractor or subcontractor and an adjudicatory proceeding, as that term is used, under Massachusetts General Laws Chapter 30A, has been conducted.

IX. Severability

The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

X. Contractor's Certification

A bidder for a state construction contract or state assisted construction contract will not be eligible for award of the contract unless such bidder has submitted to the administering agency the following certification, which will be incorporated into the resulting contract:

CONTRACTOR'S CERTIFICATION

_____ certifies that they:

(Contractor Name)

1. Will not discriminate in their employment practices;
2. Intend to use the following listed construction trades in the work under the contract

_____ ; and

3. Will make good faith efforts to comply with the minority employee and women employee workforce participation ratio goals and specific affirmative action steps contained herein; and
4. Are in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices; and
5. Will provide the provisions of the "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" to each and every subcontractor employed on the Project and will incorporate the terms of this Section into all subcontracts and work orders entered into on the Project.
6. Agree to comply with all provisions contained herein.

(Signature of authorized representative of Contractor)

Date

(Printed name of authorized representative of Contractor)

XI. Subcontractor Requirements

Prior to the award of any subcontract for a state construction contract or a state assisted construction contract, regardless of tier, the Prime or General Contractor shall provide all prospective subcontractors with a complete copy of this Section entitled "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" and will incorporate the provisions of this Section by reference into any and all contracts or work orders for all subcontractors providing work on the Project. In order to ensure that the said subcontractor's certification becomes a part of all subcontracts under the prime contract, the Prime or General Contractor shall certify in writing to the administering agency that it has complied with the requirements as set forth in the proceeding paragraph.

Attachment A-1

A. Subcontractor's Certification

Prior to the award of any Subcontract, regardless of tier, the prospective Subcontractor must execute and submit to the Contractor the following certification, which will be deemed a part of the resulting Subcontract:

SUBCONTRACTOR'S CERTIFICATION

Name of Subcontractor

certifies that:

1. He/she intends to use the following construction trades in the work under Contract:

2. Will comply with the minority/woman workforce ratio and specific affirmative action steps contained herein; and

3. Will obtain from each of his/her Subcontractors prior to the award of any Subcontract under this Contract the Subcontractor's certification required by these Bid conditions.

Signature of Authorized
Representative of
Subcontractor

**The Commonwealth of Massachusetts
Supplemental Equal Employment Opportunity,
Anti-Discrimination and Affirmative Action Program**

CONTRACT COMPLIANCE PROCEDURE

Pursuant to Section XI of the Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Anti-Discrimination and Affirmative Action Program for construction contracts, the administering and/or the contracting agency's Contract Compliance Officer or the Affirmative Action Staff is the designated agent of the Massachusetts Commission Against Discrimination (MCAD). The responsibilities of the Contract Compliance Officer (MCAD agent) are to conduct compliance monitoring and enforcement of the program requirements.

To ensure that the minority/women workforce utilization goes on all construction contracts in excess of \$50,000, as well as minority / women business enterprise (M/WBE) goals are enforced effectively, the following procedures will be followed commencing with the initial Contract Specifications preparation and continuing throughout the life of the Contract on all projects:

1. Contract Specifications
2. Bid Advertisement
3. Pre-Bid Conference
4. Pre-Construction Conference
5. Reporting System
6. Monitoring System
7. Identifying and Reporting of Non-Compliance
8. Non-Compliance Procedures
9. Recommendation and Sanction

1. CONTRACT SPECIFICATION

At the initial stage of Contract Specification preparation, the Contract Compliance Officer of the contracting agency must ensure the incorporation of the proper EEO/AA provisions in the general conditions of the Contract.

2. BID ADVERTISEMENT

The Contract Compliance Officer will review all Bid Advertisements before the notice is published to ensure that reference to the EEO/AA requirements is included.

3. PRE-BID CONFERENCE

At the Pre-Bid Conference, the Contract Compliance Officer will inform potential Bidders of the EEO/AA requirements of the Contract. These include, but are not limited to the following:

- a. Adhering to minority/women workforce utilization and M/WBE participation goals for the Contract.
- b. Informing potential Bidders that the requirements are for the life of the Contract.
- c. Informing potential Bidders that the Subcontractors are obligated to comply with the same requirements, and it is the responsibility of the Contractor to ensure that Subcontractors comply with the Contract provisions.
- d. Informing potential Bidders of the required documents and forms that he/she must sign and submit with his/her Bids, i.e., Bidder's Certification (Attachment B); Schedules for M/WBE Participation.
- e. Making information and/or resources available for M/WBE: i.e., Supplier Diversity Office (SDO); Contractors Association of Boston (CAB); Small Business Development Corporation (SBDC); New England Minority Purchasing Council (NEMPC); and any other information that will assist the Contractor in attaining the stated goals for M/WBE compliance.
- f. Making available minority/women workforce referral agencies, i.e., Community agencies; Third World Jobs Clearing House, Apprentice Recruitment Program, etc.
- g. Question and answer period.

4. PRE-CONSTRUCTION CONFERENCE

At the Pre-Construction Conference, the Contract Compliance Officer will discuss the specific EEO/AA requirements with the Contractor and Subcontractors. The Contract Compliance Officer will also:

- a) Distribute all necessary documents and reporting forms as required under the Contract provisions.
- b) Review EEO/AA requirements and goals in detail.
- c) Explain the Contractor's obligations to comply with the EEO/AA requirements and goals.
- d) Emphasize the EEO/AA provisions in Section III and Section XIV.
- e) Provide information such as resources of minority/women workforce and M/WBE referrals to assist the Contractor in achieving compliance with the Contract obligations.
- f) Review the necessary reporting forms, i.e., Contractor's Quarterly Projected Workforce Table (Form CAD 85). Contractor Certification (MassDOT Form EEO A-1 for Contractor, MassDOT Form EEO A-2 for Subcontractor), etc.
- g) Secure the name and title of the EEO/AA Officer and Project Manager from the Contractor with a letter signed by the Chief Executive Officer of the Contractor.

5. REPORTING SYSTEM

To ensure the proper compliance of the Contractor's obligations in the utilization of his/her workforce, the following reporting system will be implemented:

- a. Contractors must submit the Contractor's Quarterly Projected Workforce Table (CAD 85-1) prior to the commencement of work and no later than five (5) working days prior to the start of each new quarter to the Contract Compliance Officer.
- b. Contractors must submit the Contractor's Weekly Workforce Utilization Report CAD 85) to the Contract Compliance Officer no later than the following Tuesday of each week.
- c. The Contractor is responsible for the submission of all reports from all of his/her Subcontractors.
- d. The Contracting/Administering Agency's Contract Compliance Officer must prepare the Agency's Monthly Contract Compliance Report (CAD 75) for Minority/Women Workforce Utilization and M/WBE Contract Activities Report and send them to MCAD no later than the 15th of the month following the end of each quarter.

6. MONITORING SYSTEM

In order for the Contract Compliance Officer to effectively implement and enforce the EEO/AA requirements, the following mechanism will be utilized:

- a. Review of the weekly utilization reports submitted by the Contractors.

- b. Verify the data on the weekly reports by conducting on-site monitoring.
 - (1) On-site monitoring will be conducted either on a weekly or daily basis according to specific projects.
 - (2) When conducting on-site monitoring, the Contract Compliance Officer will initially meet with the Contractor's on-site supervisor to obtain the necessary data.
 - (3) The Contract Compliance Officer will conduct a visual head count of all the workers on-site used by each Contractor, identifying the minority workers for each trade. If needed, an interview of each worker may be conducted to verify the information submitted by the Contractor.

7. IDENTIFYING AND REPORTING OF NON-COMPLIANCE

When the Contractor's Weekly Workforce Utilization Reports indicate that the Contractor is in a condition of non-compliance and it is then verified by the Contract Compliance Officer's actual on-site visit, the procedures are as follows:

- a. The Contract Compliance Officer will notify and meet with the Contractor to remedy his/her condition of non-compliance in an attempt to bring the Contractor into compliance. All activities with the Contractor must be documented.
- b. If the Contract Compliance Officer is unable to bring the Contractor into compliance, then the Contract Compliance Officer shall send a preliminary notification of apparent non-compliance, citing specific sections of the Contract EEO/AA provisions to the Contractor and/or the Sub-Contractor via Registered Mail, detailing the necessary remedies and granting a time-frame of fourteen (14) days for the Contractor to come into compliance.
- c. If the Contractor remains in non-compliance, then the Contract Compliance Officer shall notify the MCAD and issue a second notice of apparent non-compliance, informing the Contractor that a formal non-compliance investigation will be conducted. This will include a request for specific records and documentation that the Contractor must submit within the specific compliance time-frame of fourteen (14) days.

8. NON-COMPLIANCE PROCEDURES

- a. Upon the completion of the investigation, if it is found that the Contractor is still in a condition of non-compliance, then a final notice of apparent non-compliance will be issued informing the Contractor that a formal complaint of non-compliance will be filed at MCAD.

- b. When a non-compliance complaint is filed at MCAD, the complaint must include all documentation such as reports, on-site reviews, correspondences, minutes of meeting and a copy of the Contract.
- c. MCAD will conduct a conciliation conference in an attempt to bring the Contractor into compliance. If the conference is unsuccessful, the MCD will conduct an adjudicatory hearing pursuant to M.G.L. Chapter 30A and 804 CMR 9.00.
- d. The adjudicatory hearing will provide an opportunity for the Contractor to present proof of his/her efforts to comply with the EEO/AA requirements. If the Contractor can document that he/she has exhausted every possible measure to achieve compliance, then the Contractor would be found in compliance with the EEO/AA Contract obligations. If the Contractor is unable to document every possible measure taken, then the Contractor can be found in non-compliance. A final report of non-compliance will then be issued.

9. RECOMMENDATIONS OF SANCTIONS

At the adjudicatory hearing, if the Contractor is found to be in non-compliance with the EEO/AA requirements, MCAD will make a final report of non-compliance. Once MCAD issues a final finding of non-compliance, MCAD will recommend that the administering/contracting agency impose on the Contractor one or more of the sanctions outlined in the Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Anti-Discrimination and Affirmative Action Program, Section XIV within fourteen (14) days.

- NOTE:
- (1) Non-compliance investigation will NOT be conducted without prior notice to the Contractor.
 - (2) Sanctions will NOT be imposed without providing an adjudicatory hearing (Due Process) to the Contractor.

Minority and Women Employees Reported for Current Week

[illegible]

COMMONWEALTH OF MASSACHUSETTS
CONTRACTOR'S QUARTERLY PROJECTED WORKFORCE TABLE

Name of Contractor: A Sub - Construction Inc.Address: 100 Mass. St. Boston, MA 22222

Contracting Agency: MCCA

Project Name: New Housing

Contract Dollar Value: \$5,000,000

Contract #: C-581-4

Trades Utilized: Foreman, Carpenter, Labor

Estimate Total Hours to Complete Work: 5000 Hours

Quarter Begin: January 1, 1987

End: March 31, 1987

Prepared By: John Smith, EED

Date: Dec. 20, 1986

NOTE: A revised table must be submitted if there are any changes on projections.

WEEK ENDIN G	TRADES	PROJECTED WORK	TOTAL	PROJECTED MIN. HOURS	PROJECTED WOM. HOURS
1/9- 2/13/87	No	Work			
2/20/87	Foreman	40		0	0
	Carpenter	40		0	0
2/27/87	Labor	80		40	0
3/6/87	Foreman	40		0	0
	Carpenter	120		40	40
	Labor	40		40	40
3/13/87	No Work				
3/20/87	Carpenter	60			40
3/27/87	Labor	200		40	40

COMMONWEALTH OF MASSACHUSETTS
CONTRACTOR'S QUARTERLY PROJECTED WORKFORCE TABLE

Name of Contractor: _____

Address: _____

Contracting Agency: _____ Project Name: _____

Contract Dollar Value: _____ Contract #: _____

Trades Utilized: _____

Estimate Total Hours to Complete Work: _____

Quarter Begin: _____ End: _____

Prepared By: _____ Date: _____

NOTE: A revised table must be submitted if there are any changes on projections.

WEEK ENDING	TRADES	PROJECTED WORK	TOTAL	PROJECTED MIN. HOURS	PROJECTED WOM. HOURS

SECTION VII – REFERENCE DOCUMENTS

This content is from the eCFR and is authoritative but unofficial.

Title 41 — Public Contracts and Property Management

Subtitle B — Other Provisions Relating to Public Contracts

Chapter 60 — Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor

Part 60-4 Construction Contractors—Affirmative Action Requirements

- § 60-4.1** Scope and application.
- § 60-4.2** Solicitations.
- § 60-4.3** Equal opportunity clauses.
- § 60-4.4** Affirmative action requirements.
- § 60-4.5** Hometown plans.
- § 60-4.6** Goals and timetables.
- § 60-4.7** Effect on other regulations.
- § 60-4.8** Show cause notice.
- § 60-4.9** Incorporation by operation of the order.
- § 60-4.10** Severability.

PART 60-4—CONSTRUCTION CONTRACTORS—AFFIRMATIVE ACTION REQUIREMENTS

Authority: Secs. 201, 202, 205, 211, 301, 302, and 303 of E.O. 11246, as amended, 30 FR 12319; 32 FR 14303, as amended by E.O. 12086; and E.O. 13672, 79 FR 42971.

Source: 43 FR 49254, Oct. 20, 1978, unless otherwise noted.

§ 60-4.1 Scope and application.

This part applies to all contractors and subcontractors which hold any Federal or federally assisted construction contract in excess of \$10,000. The regulations in this part are applicable to all of a construction contractor's or subcontractor's construction employees who are engaged in on site construction including those construction employees who work on a non-Federal or nonfederally assisted construction site. This part also establishes procedures which all Federal contracting officers and all applicants, as applicable, shall follow in soliciting for and awarding Federal or federally assisted construction contracts. Procedures also are established which administering agencies shall follow in making any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of Executive Order 11246, as amended.

In addition, this part applies to construction work performed by construction contractors and subcontractors for Federal nonconstruction contractors and subcontractors if the construction work is necessary in whole or in part to the performance of a nonconstruction contract or subcontract.

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978]

§ 60-4.2 Solicitations.

- (a) All Federal contracting officers and all applicants shall include the notice set forth in paragraph (d) of this section and the Standard Federal Equal Employment Opportunity Construction Contract Specifications set forth in § 60-4.3 of this part in all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts to be performed in geographical areas designated by the Director pursuant to § 60-4.6 of the part. Administering agencies shall require the inclusion of the notice set forth in paragraph (d) of this section and the specifications set forth in § 60-4.3 of this part as a condition of any grant, contract, subcontract, loan, insurance or guarantee involving federally assisted construction covered by this part 60-4.
- (b) All nonconstruction contractors covered by Executive Order 11246 and the implementing regulations shall include the notice in paragraph (d) of this section in all construction agreements which are necessary in whole or in part to the performance of the covered nonconstruction contract.
- (c) Contracting officers, applicants and nonconstruction contractors shall give written notice to the Director within 10 working days of award of a contract subject to these provisions. The notification shall include the name, address and telephone number of the contractor; employer identification number; dollar amount of the contract, estimated starting and completion dates of the contract; the contract number; and geographical area in which the contract is to be performed.
- (d) The following notice shall be included in, and shall be a part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to § 60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action To Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment 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:

Time- tables	Goals for minority participation for each trade	Goals for female participation in each trade
	Insert goals for each year	Insert goals for each year.

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside 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 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 (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978, as amended at 45 FR 65977, Oct. 3, 1980]

§ 60-4.3 Equal opportunity clauses.

- (a) The equal opportunity clause published at 41 CFR 60-1.4(a) of this chapter is required to be included in, and is part of, all nonexempt Federal contracts and subcontracts, including construction contracts and subcontracts. The equal opportunity clause published at 41 CFR 60-1.4(b) is required to be included in, and is a part of, all nonexempt federally assisted construction contracts and subcontracts. In addition to the clauses described above, all Federal contracting officers, all applicants and all nonconstruction contractors, as applicable, shall include the specifications set forth in this section in all Federal and

federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to § 60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of nonconstruction Federal contracts and subcontracts covered under the Executive order.

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

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, United States 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:

(i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

(iii) 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

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

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

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors 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 7 a through p 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 geographical areas where they do not have a Federal or federally assisted constuction 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 on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

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

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

- (b) The notice set forth in 41 CFR 60-4.2 and the specifications set forth in 41 CFR 60-4.3 replace the New Form for Federal Equal Employment Opportunity Bid Conditions for Federal and Federally Assisted Construction published at 41 FR 32482 and commonly known as the Model Federal EEO Bid Conditions, and the New Form shall not be used after the regulations in 41 CFR part 60-4 become effective.

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978, as amended at 45 FR 65978, Oct. 3, 1980; 79 FR 72995, Dec. 9, 2014]

§ 60-4.4 Affirmative action requirements.

- (a) To implement the affirmative action requirements of Executive Order 11246 in the construction industry, the Office of Federal Contract Compliance Programs previously has approved affirmative action programs commonly referred to as "Hometown Plans," has promulgated affirmative action plans referred to as "Imposed Plans" and has approved "Special Bid Conditions" for high impact projects constructed in areas not covered by a Hometown or an Imposed Plan. All solicitations for construction contracts made after the effective date of the regulations in this part shall include the notice specified in § 60-4.2 of this part and the specifications in § 60-4.3 of this part in lieu of the Hometown and Imposed Plans including the Philadelphia Plan and Special Bid Conditions. Until the Director has issued an order pursuant to § 60-4.6 of this part establishing goals and timetables for minorities in the appropriate geographical areas or for a project covered by Special Bid Conditions, the goals and timetables for minorities to be inserted in the Notice required by 41 CFR 60-4.2 shall be the goals and timetables contained in the Hometown Plan, Imposed Plan or Special Bid Conditions presently covering the respective geographical area or project involved.
- (b) Signatories to a Hometown Plan (including heavy highway affirmative action plans) shall have 45 days from the effective date of the regulations in this part to submit under such a Plan (for the director's approval) goals and timetables for women and to include female representation on the Hometown Plan Administrative Committee. Such goals for female representation shall be at least as high as the goals

established for female representation in the notice issued pursuant to 41 CFR 60-4.6. Failure of the signatories, within the 45-day period, to include female representation and to submit goals for women or a new plan, as appropriate, shall result in an automatic termination of the Office of Federal Contract Compliance Program's approval of the Hometown Plan. At any time the Office of Federal Contract Compliance Programs terminates or withdraws its approval of a Hometown Plan, or when the plan expires and another plan is not approved, the contractors signatory to the plan shall be covered automatically by the specifications set forth in § 60-4.3 of this part and by the goals and timetables established for that geographical area pursuant to § 60-4.6 of this part.

§ 60-4.5 Hometown plans.

- (a) A contractor participating, either individually or through an association, in an approved Hometown Plan (including heavy highway affirmative action plans) shall comply with its affirmative action obligations under Executive Order 11246 by complying with its obligations under the plan: *Provided*, That each contractor or subcontractor participating in an approved plan is individually required to comply with the equal opportunity clause set forth in 41 CFR 60-1.4; to make a good faith effort to achieve the goals for each trade participating in the plan in which it has employees; and that the overall good 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's goals and timetables. If a contractor is not participating in an approved Hometown Plan it shall comply with the specifications set forth in § 60-4.3 of this part and with the goals and timetables for the appropriate area as listed in the notice required by 41 CFR 60-4.2 with regard to that trade. For the purposes of this part 60-4, a contractor is not participating in a Hometown Plan for a particular trade if it:
 - (1) Ceases to be signatory to a Hometown Plan covering that trade;
 - (2) Is signatory to a Hometown Plan for that trade but is not party to a collective bargaining agreement for that trade;
 - (3) Is signatory to a Hometown Plan for that trade but is party to a collective bargaining agreement with labor organizations which are not or cease to be signatories to the same Hometown Plan for that trade;
 - (4) Is signatory to a Hometown Plan for that trade but is party to a collective bargaining agreement with a labor organization for that trade but the two have not jointly executed a specific commitment to minority and female goals and timetables and incorporated the commitment in the Hometown Plan for that trade;
 - (5) Is participating in a Hometown Plan for that trade which is no longer acceptable to the Office of Federal Contract Compliance Programs;
 - (6) Is signatory to a Hometown Plan for that trade but is party to a collective bargaining agreement with a labor organization for that trade and the labor organization and the contractor have failed to make a good faith effort to comply with their obligations under the Hometown Plan for that trade.
- (b) Contractors participating in Hometown Plans must be able to demonstrate their participation and document their compliance with the provision of the Hometown Plan.

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978]

§ 60-4.6 Goals and timetables.

The Director, from time to time, shall issue goals and timetables for minority and female utilization which shall be based on appropriate workforce, demographic or other relevant data and which shall cover construction projects or construction contracts performed in specific geographical areas. The goals, which shall be applicable to each construction trade in a covered contractor's or subcontractor's entire workforce which is working in the area covered by the goals and timetables, shall be published as notices in the FEDERAL REGISTER, and shall be inserted by the contracting officers and applicants, as applicable, in the Notice required by 41 CFR 60-4.2. Covered construction contractors performing construction work in 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.

[45 FR 65978, Oct. 3, 1980]

§ 60-4.7 Effect on other regulations.

The regulations in this part are in addition to the regulations contained in this chapter which apply to construction contractors and subcontractors generally. See particularly, 41 CFR 60-1.4 (a), (b), (c), (d), and (e); 60-1.5; 60-1.7; 60-1.8; 60-1.26; 60-1.29; 60-1.30; 60-1.32; 60-1.41; 60-1.42; 60-1.43; and 41 CFR part 60-3; part 60-20; part 60-30; part 60-40; and part 60-50.

§ 60-4.8 Show cause notice.

If an investigation or compliance review reveals that a construction contractor or subcontractor has violated the Executive order, any contract clause, specifications or the regulations in this chapter and if administrative enforcement is contemplated, the Director shall issue to the contractor or subcontractor a notice to show cause which shall contain the items specified in paragraphs (i) through (iv) of 41 CFR 60-2.2(c)(1). If the contractor does not show good cause within 30 days, or in the alternative, fails to enter an acceptable conciliation agreement which includes where appropriate, make up goals and timetables, back pay, and seniority relief for affected class members, the OFCCP shall follow the procedure in 41 CFR 60-1.26(b): *Provided*, That where a conciliation agreement has been violated, no show cause notice is required prior to the initiation of enforcement proceedings.

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978]

§ 60-4.9 Incorporation by operation of the order.

By operation of the order, the equal opportunity clause contained in § 60-1.4, the Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246) contained in § 60-4.2, and the Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246) contained in § 60-4.3 shall be deemed to be a part of every solicitation or of every contract and subcontract, as appropriate, required by the order and the regulations in this chapter to include such clauses whether or not they are physically incorporated in such solicitation or contract and whether or not the contract is written.

§ 60-4.10 Severability.

Should a court of competent jurisdiction hold any provision(s) of this part to be invalid, such action will not affect any other provision of this part.

[88 FR 51735, Aug. 4, 2023]

This content is from the eCFR and is authoritative but unofficial.

Title 49 —Transportation

Subtitle A —Office of the Secretary of Transportation

Part 26 Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs

Subpart A General

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Appendix A to Part 26

Guidance Concerning Good Faith Efforts

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Appendix C to Part 26

DBE Business Development Program Guidelines

Appendix D to Part 26

Mentor-Protégé Program Guidelines

PART 26—PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES IN DEPARTMENT OF TRANSPORTATION FINANCIAL ASSISTANCE PROGRAMS

Authority: 23 U.S.C. 304 and 324; 42 U.S.C. 2000d, *et seq.*; 49 U.S.C. 47113, 47123; Sec. 1101(b), Pub. L. 114-94, 129 Stat. 1312, 1324 (23 U.S.C. 101 note); Sec. 150, Pub. L. 115-254, 132 Stat. 3215 (23 U.S.C. 101 note); Pub. L. 117-58, 135 Stat. 429 (23 U.S.C. 101 note).

Source: 64 FR 5126, Feb. 2, 1999, unless otherwise noted.

Subpart A—General

§ 26.1 What are the objectives of this part?

This part seeks to achieve several objectives:

- (a) To ensure nondiscrimination in the award and administration of DOT-assisted contracts in the Department's highway, transit, and airport financial assistance programs;
- (b) To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;
- (c) To ensure that the Department's DBE program is narrowly tailored in accordance with applicable law;
- (d) To ensure that only firms that fully meet this part's eligibility standards are permitted to participate as DBEs;
- (e) To help remove barriers to the participation of DBEs in DOT-assisted contracts;
- (f) To promote the use of DBEs in all types of federally assisted contracts and procurement activities conducted by recipients.
- (g) To assist the development of firms that can compete successfully in the marketplace outside the DBE program; and
- (h) To provide appropriate flexibility to recipients of Federal financial assistance in establishing and providing opportunities for DBEs.

[64 FR 5126, Feb. 2, 1999, as amended at 79 FR 59592, Oct. 2, 2014; 89 FR 24963, Apr. 9, 2024]

§ 26.3 To whom does this part apply?

- (a) If you are a recipient of any of the following types of funds, this part applies to you:
 - (1) Federal-aid highway funds authorized under Titles I (other than Part B) and V of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Public Law 102-240, 105 Stat. 1914, or Titles I, III, and V of the Transportation Equity Act for the 21st Century (TEA-21), Public Law 105-178, 112 Stat. 107. Titles I, III, and V of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Public Law 109-59, 119 Stat. 1144; Divisions A and B of the Moving Ahead for Progress in the 21st Century Act (MAP-21), Pub. L. 112-141, 126 Stat. 405; Titles I, II, III,

and VI of the Fixing America's Surface Transportation Act (FAST Act) Public Law 114-94; and Divisions A and C of the Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (IIJA), Public Law 117-58.

(2) Federal transit funds authorized by Titles I, III, V and VI of ISTEA, Public Law 102-240 or by Federal transit laws in Title 49, U.S. Code, or Titles I, III, and V of the TEA-21, Public Law 105-178. Titles I, III, and V of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Public Law 109-59, 119 Stat. 1144; Divisions A and B of the Moving Ahead for Progress in the 21st Century Act (MAP-21), Public Law 112-141, 126 Stat. 405; Titles I, II, III, and VI of the Fixing America's Surface Transportation Act (FAST Act) Public Law 114-94; and Divisions A and C of the Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (IIJA) (Pub. L. 117-58), Public Law 117-58.

(3) Airport funds authorized by 49 U.S.C. 47101, *et seq.*

(b) [Reserved]

(c) If you are letting a contract, and that contract is to be performed entirely outside the United States, its territories and possessions, Puerto Rico, Guam, or the Northern Mariana Islands, this part does not apply to the contract.

(d) If you are letting a contract in which DOT financial assistance does not participate, this part does not apply to the contract.

[89 FR 24963, Apr. 9, 2024]

§ 26.5 Definitions.

Affiliation has the same meaning the term has in the Small Business Administration (SBA) regulations, 13 CFR part 121.

(1) Except as otherwise provided in 13 CFR part 121, concerns are affiliates of each other when, either directly or indirectly:

(i) One concern controls or has the power to control the other; or

(ii) A third party or parties controls or has the power to control both; or

(iii) An identity of interest between or among parties exists such that affiliation may be found.

(2) In determining whether affiliation exists, it is necessary to consider all appropriate factors, including common ownership, common management, and contractual relationships. Affiliates must be considered together in determining whether a concern meets small business size criteria and the statutory cap on the participation of firms in the DBE program.

Alaska Native means a citizen of the United States who is a person of one-fourth degree or more Alaskan Indian (including Tsimshian Indians not enrolled in the Metlakatla Indian Community), Eskimo, or Aleut blood, or a combination of those bloodlines. The term includes, in the absence of proof of a minimum blood quantum, any citizen whom a Native village or Native group regards as an Alaska Native if their father or mother is regarded as an Alaska Native.

Alaska Native Corporation (ANC) means any Regional Corporation, Village Corporation, Urban Corporation, or Group Corporation organized under the laws of the State of Alaska in accordance with the Alaska Native Claims Settlement Act, as amended (43 U.S.C. 1601, *et seq.*).

Assets mean all the property of a person available for paying debts or for distribution, including one's respective share of jointly held assets. This includes, but is not limited to, cash on hand and in banks, savings accounts, IRA or other retirement accounts, accounts receivable, life insurance, stocks and bonds, real estate, and personal property.

Business, business concern or business enterprise means an entity organized for profit with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the United States economy through payment of taxes or use of American products, materials, or labor.

Compliance means that a recipient has correctly implemented the requirements of this part.

Contingent Liability means a liability that depends on the occurrence of a future and uncertain event. This includes, but is not limited to, guaranty for debts owed by the applicant concern, legal claims and judgments, and provisions for federal income tax.

Contract means a legally binding relationship obligating a seller to furnish supplies or services (including, but not limited to, construction and professional services) and the buyer to pay for them. For purposes of this part, a lease is considered to be a contract.

Contractor means one who participates, through a contract or subcontract (at any tier), in a DOT-assisted highway, transit, or airport program.

Days mean calendar days. In computing any period of time described in this part, the day from which the period begins to run is not counted, and when the last day of the period is a Saturday, Sunday, or Federal holiday, the period extends to the next day that is not a Saturday, Sunday, or Federal holiday. Similarly, in circumstances where the recipient's offices are closed for all or part of the last day, the period extends to the next day on which the agency is open.

Department or DOT means the U.S. Department of Transportation, including the Office of the Secretary, the Departmental Office of Civil Rights, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Federal Aviation Administration (FAA).

Disadvantaged Business Enterprise or DBE means a for-profit small business concern—

- (1) That is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged; and
- (2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

DOT-assisted contract means any contract between a recipient and a contractor (at any tier) funded in whole or in part with DOT financial assistance, including letters of credit or loan guarantees, except a contract solely for the purchase of land.

FTA Tier I recipient means an FTA recipient to whom this part applies that will award prime contracts (excluding transit vehicle purchases) the cumulative total value of which exceeds \$670,000 in FTA funds in a Federal fiscal year.

FTA Tier II recipient means an FTA recipient to whom this part applies who will award prime contracts (excluding transit vehicle purchases) the cumulative total value of which does not exceed \$670,000 in FTA funds in a Federal fiscal year.

Good faith efforts means efforts to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

Immediate family member means father, mother, husband, wife, son, daughter, brother, sister, grandfather, grandmother, father-in-law, mother-in-law, sister-in-law, brother-in-law, and domestic partner and civil unions recognized under State law.

Indian Tribe or Native American Tribe means any federally or State-recognized Tribe, band, nation, or other organized group of Indians (Native Americans), or an ANC.

Joint venture means an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

Liabilities mean financial or pecuniary obligations. This includes, but is not limited to, accounts payable, notes payable to bank or others, installment accounts, mortgages on real estate, and unpaid taxes.

Native Hawaiian means any individual whose ancestors were natives, prior to 1778, of the area which now comprises the State of Hawaii.

Native Hawaiian Organization means any community service organization serving Native Hawaiians in the State of Hawaii which is a not-for-profit organization chartered by the State of Hawaii, is controlled by Native Hawaiians, and whose business activities will principally benefit such Native Hawaiians.

Noncompliance means that a recipient has not correctly implemented the requirements of this part.

Notice of decision or NOD means determination that denies a firm's application or decertifies a DBE.

Notice of intent or NOI means recipients letter informing a DBE of a suspension or proposed decertification.

Operating Administration or OA means any of the following parts of DOT: the Federal Aviation Administration (FAA), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA). The "Administrator" of an operating administration includes his or her designees.

Personal net worth or PNW means the net value of an individual's reportable assets and liabilities, per the calculation rules in § 26.68.

Primary industry classification means the most current North American Industry Classification System (NAICS) designation which best describes the primary business of a firm. The NAICS is described in the North American Industry Classification Manual—United States, which is available online on the U.S. Census Bureau website: www.census.gov/naics/.

Primary recipient means a recipient which receives DOT financial assistance and passes some or all of it on to another recipient.

Principal place of business means the business location where the individuals who manage the firm's day-to-day operations spend most working hours. If the offices from which management is directed and where the business records are kept are in different locations, the recipient will determine the principal place of business. The term does not include construction trailers or other temporary construction sites.

Program means any undertaking on a recipient's part to use DOT financial assistance, authorized by the laws to which this part applies.

Race-conscious measure or program is one that is focused specifically on assisting only DBEs, including women-owned DBEs.

Race-neutral measure or program is one that is, or can be, used to assist all small businesses. For the purposes of this part, *race-neutral* includes gender-neutrality.

Recipient means any entity, public or private, to which DOT financial assistance is extended, whether directly or through another recipient, through the programs of the FAA, FHWA, or FTA, or that has applied for such assistance.

Secretary means DOT's Secretary of Transportation or the Secretary's designee.

Set-aside means a contracting practice restricting eligibility for the competitive award of a contract solely to DBE firms.

Small Business Administration or SBA means the United States Small Business Administration.

SBA certified firm refers to firms that have a current, valid certification from or recognized by the SBA under the 8(a) BD or SDB programs.

Small business concern means, with respect to firms seeking to participate as DBEs in DOT-assisted contracts, a small business concern as defined pursuant to section 3 of the Small Business Act and Small Business Administration regulations implementing it (13 CFR part 121) that also does not exceed the cap on average annual gross receipts specified in § 26.65(b).

Socially and economically disadvantaged individual means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who has been subjected to racial or ethnic prejudice or cultural bias within American society because of his or her identity as a member of a group and without regard to his or her individual qualities. The social disadvantage must stem from circumstances beyond the individual's control.

- (1) Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis. An individual must demonstrate that he or she has held himself or herself out, as a member of a designated group if you require it.
- (2) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - (i) "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;
 - (ii) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - (iii) "Native Americans," which includes persons who are enrolled members of a federally or State recognized Indian tribe, Alaska Natives, or Native Hawaiians;
 - (iv) "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Mariana Islands, Samoa, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong;
 - (v) "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, Maldives, Nepal or Sri Lanka;

(vi) Women;

(vii) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

(3) Being born in a particular country does not, standing alone, mean that a person is necessarily a member of one of the groups listed in this definition.

Spouse means a married person, including a person in a domestic partnership or a civil union recognized under State law.

Transit vehicle manufacturer (TVM) means any manufacturer whose primary business purpose is to manufacture vehicles built for mass transportation. Such vehicles include, but are not limited to buses, rail cars, trolleys, ferries, and vehicles manufactured specifically for paratransit purposes. Businesses that perform retrofitting or post-production alterations to vehicles so that such vehicles may be used for public transportation purposes are also considered TVMs. Businesses that manufacture, mass-produce, or distribute vehicles primarily for personal use are not considered TVMs.

Tribally-owned concern means any concern at least 51 percent owned by an Indian tribe as defined in this section.

Unsworn declaration means an unsworn statement, dated and in writing, subscribed as true under penalty of perjury.

You refers to a recipient, unless a statement in the text of this part or the context requires otherwise (i.e., 'You must do XYZ' means that recipients must do XYZ).

[64 FR 5126, Feb. 2, 1999, as amended at 64 FR 34570, June 28, 1999; 68 FR 35553, June 16, 2003; 76 FR 5096, Jan. 28, 2011; 79 FR 59592, Oct. 2, 2014; 89 FR 24963, Apr. 9, 2024]

§ 26.7 What discriminatory actions are forbidden?

- (a) You must never exclude any person from participation in, deny any person the benefits of, or otherwise discriminate against anyone in connection with the award and performance of any contract covered by this part on the basis of race, color, sex, or national origin.
- (b) In administering your DBE program, you must not, directly or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the objectives of the program with respect to individuals of a particular race, color, sex, or national origin.

§ 26.9 How does the Department issue guidance and interpretations under this part?

- (a) Only guidance and interpretations (including interpretations set forth in certification appeal decisions) consistent with this part 26 and issued after March 4, 1999 express the official positions and views of the Department of Transportation or any of its operating administrations.
- (b) The Secretary of Transportation, Office of the Secretary of Transportation, FHWA, FTA, and FAA may issue written interpretations of or written guidance concerning this part. Written interpretations and guidance are valid, and express the official positions and views of the Department of Transportation or any of its operating administrations, only if they are issued over the signature of the Secretary of Transportation or if they contain the following statement:

The General Counsel of the Department of Transportation has reviewed this document and approved it as consistent with the language and intent of 49 CFR part 26.

[72 FR 15617, Apr. 2, 2007]

§ 26.11 What records do recipients keep and report?

- (a) You must submit a report on DBE participation to the concerned Operating Administration containing all the information described in the Uniform Report to this part. This report must be submitted at the intervals required by, and in the format acceptable to, the concerned Operating Administration.
- (b) You must continue to provide data about your DBE program to the Department as directed by DOT Operating Administrations.
- (c) You must obtain bidders list information as described in paragraph (c)(2) of this section and enter it into a system designated by the Department.
 - (1) The purpose of this bidders list information is to compile as accurate data as possible about the universe of DBE and non-DBE contractors and subcontractors who seek to work on your federally assisted contracts for use in helping you set your overall goals, and to provide the Department with data for evaluating the extent to which the objectives of § 26.1 are being achieved.
 - (2) You must obtain the following bidders list information about all DBE and non-DBEs who bid as prime contractors and subcontractors on each of your federally assisted contracts:
 - (i) Firm name;
 - (ii) Firm address including ZIP code;
 - (iii) Firm's status as a DBE or non-DBE;
 - (iv) Race and gender information for the firm's majority owner;
 - (v) NAICS code applicable to each scope of work the firm sought to perform in its bid;
 - (vi) Age of the firm; and
 - (vii) The annual gross receipts of the firm. You may obtain this information by asking each firm to indicate into what gross receipts bracket they fit (e.g., less than \$1 million; \$1-3 million; \$3-6 million; \$6-10 million; etc.) rather than requesting an exact figure from the firm.
 - (3) You must collect the data from all bidders for your federally assisted contracts by requiring the information in paragraph (c)(2) of this section to be submitted with their bids or initial responses to negotiated procurements. You must enter this data in the Department's designated system no later than December 1 following the fiscal year in which the relevant contract was awarded. In the case of a "design-build" contracting situation where subcontracts will be solicited throughout the contract period as defined in a DBE Performance Plan pursuant to § 26.53(e), the data must be entered no later than December 1 following the fiscal year in which the design-build contractor awards the relevant subcontract(s).
- (d) You must maintain records documenting a firm's compliance with the requirements of this part. At a minimum, you must keep a complete application package for each certified firm and all Declarations of Eligibility, change notices, and on-site visit reports. These records must be retained in accordance with applicable record retention requirements for the recipient's financial assistance agreement. Other

certification or compliance related records must be retained for a minimum of three (3) years unless otherwise provided by applicable record retention requirements for the recipient's financial assistance agreement, whichever is longer.

- (e) The State department of transportation in each Unified Certification Program (UCP) established pursuant to § 26.81 must report to DOT's Departmental Office of Civil Rights each year, the following information:
 - (1) The number and percentage of in-state and out-of-state DBE certifications by gender and ethnicity (Black American, Asian-Pacific American, Native American, Hispanic American, Subcontinent-Asian Americans, and non-minority);
 - (2) The number of DBE certification applications received from in-state and out-of-state firms and the number found eligible and ineligible;
 - (3) The number of decertified firms:
 - (i) Total in-state and out-of-state firms decertified;
 - (ii) Names of in-state and out-of-state firms decertified because SEDO exceeded the personal net worth cap;
 - (iii) Names of in-state and out-of-state firms decertified for excess gross receipts beyond the relevant size standard.
 - (4) The number of in-state and out-of-state firms summarily suspended;
 - (5) The number of in-state and out-of-state applications received for an individualized determination of social and economic disadvantage status;
 - (6) The number of in-state and out-of-state firms certified whose owner(s) made an individualized showing of social and economic disadvantaged status.

[89 FR 24964, Apr. 9, 2024]

§ 26.13 What assurances must recipients and contractors make?

- (a) Each financial assistance agreement you sign with a DOT operating administration (or a primary recipient) must include the following assurance: The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under 49 CFR part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).
- (b) Each contract you sign with a contractor (and each subcontract the prime contractor signs with a subcontractor) must include the following assurance: The contractor, sub recipient 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.

[79 FR 59593, Oct. 2, 2014]

§ 26.15 How can recipients apply for exemptions or waivers?

- (a) You can apply for an exemption from any provision of this part. To apply, you must request the exemption in writing from the Office of the Secretary of Transportation, FHWA, FTA, or FAA. The Secretary will grant the request only if it documents special or exceptional circumstances, not likely to be generally applicable, and not contemplated in connection with the rulemaking that established this part, that make your compliance with a specific provision of this part impractical. You must agree to take any steps that the Department specifies to comply with the intent of the provision from which an exemption is granted. The Secretary will issue a written response to all exemption requests.
- (b) You can apply for a waiver of any provision of Subpart B or C of this part including, but not limited to, any provisions regarding administrative requirements, overall goals, contract goals or good faith efforts. Program waivers are for the purpose of authorizing you to operate a DBE program that achieves the objectives of this part by means that may differ from one or more of the requirements of Subpart B or C of this part. To receive a program waiver, you must follow these procedures:
 - (1) You must apply through the concerned operating administration. The application must include a specific program proposal and address how you will meet the criteria of paragraph (b)(2) of this section. Before submitting your application, you must have had public participation in developing your proposal, including consultation with the DBE community and at least one public hearing. Your application must include a summary of the public participation process and the information gathered through it.
 - (2) Your application must show that—
 - (i) There is a reasonable basis to conclude that you could achieve a level of DBE participation consistent with the objectives of this part using different or innovative means other than those that are provided in subpart B or C of this part;
 - (ii) Conditions in your jurisdiction are appropriate for implementing the proposal;
 - (iii) Your proposal would prevent discrimination against any individual or group in access to contracting opportunities or other benefits of the program; and
 - (iv) Your proposal is consistent with applicable law and program requirements of the concerned operating administration's financial assistance program.
 - (3) The Secretary has the authority to approve your application. If the Secretary grants your application, you may administer your DBE program as provided in your proposal, subject to the following conditions:

- (i) DBE eligibility is determined as provided in subparts D and E of this part, and DBE participation is counted as provided in § 26.49;
 - (ii) Your level of DBE participation continues to be consistent with the objectives of this part;
 - (iii) There is a reasonable limitation on the duration of your modified program; and
 - (iv) Any other conditions the Secretary makes on the grant of the waiver.
- (4) The Secretary may end a program waiver at any time and require you to comply with this part's provisions. The Secretary may also extend the waiver, if he or she determines that all requirements of paragraphs (b)(2) and (3) of this section continue to be met. Any such extension shall be for no longer than period originally set for the duration of the program.

Subpart B—Administrative Requirements for DBE Programs for Federally Assisted Contracting

§ 26.21 Who must have a DBE program?

- (a) If you are in one of these categories and let DOT-assisted contracts, you must have a DBE program meeting the requirements of this part:
 - (1) All FHWA primary recipients receiving funds authorized by a statute to which this part applies;
 - (2) All FTA recipients receiving planning, capital and/or operating assistance must maintain a DBE program.
 - (i) FTA Tier I recipients must have a DBE program meeting all the requirements of this part.
 - (ii) Beginning 180 days after the publication of the final rule, FTA Tier II recipients must maintain a program locally meeting the following requirements of this part:
 - (A) Reporting and recordkeeping under § 26.11;
 - (B) Contract assurances under § 26.13;
 - (C) Policy statement under § 26.23;
 - (D) Fostering small business participation under § 26.39; and
 - (E) Transit vehicle procurements under § 26.49.
 - (3) FAA recipients receiving grants for airport planning or development that will award prime contracts the cumulative total value of which exceeds \$250,000 in FAA funds in a Federal fiscal year.
- (b)
 - (1) You must submit a conforming DBE program to the concerned Operating Administration (OA). Once the OA has approved your program, the approval counts for all of your DOT-assisted programs (except goals that are reviewed by the relevant OA).
 - (2) You do not have to submit regular updates of your DBE program plan if you remain in compliance with this part. However, you must submit significant changes to the relevant OA for approval.
- (c) You are not eligible to receive DOT financial assistance unless DOT has approved your DBE program and you are in compliance with it and this part. You must continue to carry out your DBE program until all funds from DOT financial assistance have been expended.

[89 FR 24965, Apr. 9, 2024]

§ 26.23 What is the requirement for a policy statement?

You must issue a signed and dated policy statement that expresses your commitment to your DBE program, states its objectives, and outlines responsibilities for its implementation. You must circulate the statement throughout your organization and to the DBE and non-DBE business communities that perform work on your DOT-assisted contracts.

§ 26.25 What is the requirement for a liaison officer?

You must have a DBE liaison officer, who shall have direct, independent access to your Chief Executive Officer concerning DBE program matters. The liaison officer shall be responsible for implementing all aspects of your DBE program. You must also have adequate staff to administer the program in compliance with this part.

§ 26.27 What efforts must recipients make concerning DBE financial institutions?

You must thoroughly investigate the full extent of services offered by financial institutions owned and controlled by socially and economically disadvantaged individuals in your community and make reasonable efforts to use these institutions. You must also encourage prime contractors to use such institutions.

§ 26.29 What prompt payment mechanisms must recipients have?

- (a) You must establish, as part of your DBE program, a contract clause to require prime contractors to pay subcontractors for satisfactory performance of their contracts no later than 30 days from receipt of each payment you make to the prime contractor.
- (b) You must ensure prompt and full payment of retainage from the prime contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. You must use one of the following methods to comply with this requirement:
 - (1) You may decline to hold retainage from prime contractors and prohibit prime contractors from holding retainage from subcontractors.
 - (2) You may decline to hold retainage from prime contractors and require a contract clause obligating prime contractors to make prompt and full payment of any retainage kept by prime contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed.
 - (3) You may hold retainage from prime contractors and provide for prompt and regular incremental acceptances of portions of the prime contract, pay retainage to prime contractors based on these acceptances, and require a contract clause obligating the prime contractor to pay all retainage owed to the subcontractor for satisfactory completion of the accepted work within 30 days after your payment to the prime contractor.
- (c) For purposes of this section, 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 recipient. When a recipient 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.

- (d) Your DBE program must include the mechanisms you will use for proactive monitoring and oversight of a prime contractor's compliance with subcontractor prompt payment and return of retainage requirements in this part. Reliance on complaints or notifications from subcontractors about a contractor's failure to comply with prompt payment and retainage requirements is not a sufficient monitoring and oversight mechanism.
- (e) Your DBE program must provide appropriate means to enforce the requirements of this section. These means must be described in your DBE program and should include appropriate penalties for failure to comply, the terms and conditions of which you set. Your program may also provide that any delay or postponement of payment among the parties may take place only for good cause, with your prior written approval.
- (f) Prompt payment and return of retainage requirements in this part also apply to all lower-tier subcontractors.
- (g) You may also establish, as part of your DBE program, any of the following additional mechanisms to ensure prompt payment:
 - (1) A contract clause that requires prime contractors to include in their subcontracts language providing that prime contractors and subcontractors will use appropriate alternative dispute resolution mechanisms to resolve payment disputes. You may specify the nature of such mechanisms.
 - (2) A contract clause providing that the prime contractor will not be reimbursed for work performed by subcontractors unless and until the prime contractor ensures that the subcontractors are promptly paid for the work they have performed.
 - (3) Other mechanisms, consistent with this part and applicable state and local law, to ensure that DBEs and other contractors are fully and promptly paid.

[68 FR 35553, June 16, 2003, as amended at 89 FR 24965, Apr. 9, 2024; 89 FR 55089, July 3, 2024]

§ 26.31 What information must a UCP include in its DBE/ACDBE directory?

- (a) In the directory required under § 26.81(g), you must list all firms eligible to participate as a DBE and/or ACDBE in your program. In the listing for each firm, you must include its business address, business phone number, firm website(s), and the types of work the firm has been certified to perform as a DBE and/or ACDBE.
- (b) You must list each type of work a DBE and/or ACDBE is eligible to perform by using the most specific NAICS code available to describe each type of work the firm performs. Pursuant to § 26.73(a), your directory must allow for NAICS codes to be supplemented with specific descriptions of the type(s) of work the firm performs.
- (c) Your directory may include additional data fields of other items readily verifiable in State or locally maintained databases, such as State licenses held, Prequalifications, and Bonding capacity.
- (d) Your directory must be an online system that permits the public to search and/or filter for DBEs by:
 - (1) Physical location;
 - (2) NAICS code(s);
 - (3) Work descriptions; and

- (4) All optional information added pursuant to paragraph (c) of this section. The directory must include a prominently displayed disclaimer (e.g., large type, bold font) that states the information within the directory is not a guarantee of the DBE's capacity and ability to perform work.
- (e) You must make any changes to your current directory entries by November 5, 2024.

[89 FR 24965, Apr. 9, 2024; 89 FR 55089, July 3, 2024]

§ 26.33 What steps must a recipient take to address overconcentration of DBEs in certain types of work?

- (a) If you determine that DBE firms are so overconcentrated in a certain type of work as to unduly burden the opportunity of non-DBE firms to participate in this type of work, you must devise appropriate measures to address this overconcentration.
- (b) These measures may include the use of incentives, technical assistance, business development programs, mentor-protégé programs, and other appropriate measures designed to assist DBEs in performing work outside of the specific field in which you have determined that non-DBEs are unduly burdened. You may also consider varying your use of contract goals, to the extent consistent with § 26.51, to ensure that non-DBEs are not unfairly prevented from competing for subcontracts.
- (c) You must obtain the approval of the concerned DOT operating administration for your determination of overconcentration and the measures you devise to address it. Once approved, the measures become part of your DBE program.

§ 26.35 What role do business development and mentor-protégé programs have in the DBE program?

- (a) You may or, if an operating administration directs you to, you must establish a DBE business development program (BDP) to assist firms in gaining the ability to compete successfully in the marketplace outside the DBE program. You may require a DBE firm, as a condition of receiving assistance through the BDP, to agree to terminate its participation in the DBE program after a certain time has passed or certain objectives have been reached. See Appendix C of this part for guidance on administering BDP programs.
- (b) As part of a BDP or separately, you may establish a "mentor-protégé" program, in which another DBE or non-DBE firm is the principal source of business development assistance to a DBE firm.
 - (1) Only firms you have certified as DBEs before they are proposed for participation in a mentor-protégé program are eligible to participate in the mentor-protégé program.
 - (2) In the mentor-protégé relationship, you must:
 - (i) Not award DBE credit to a non-DBE mentor firm for using its own protégé firm for more than one half of its goal on any contract let by the recipient; and
 - (ii) Not award DBE credit to a non-DBE mentor firm for using its own protégé firm for more than every other contract performed by the protégé firm.
 - (3) For purposes of making determinations of business size under this part, you must not treat protégé firms as affiliates of mentor firms, when both firms are participating under an approved mentor-protégé program. See Appendix D of this part for guidance concerning the operation of mentor-protégé programs.

- (c) Your BDPs and mentor-protégé programs must be approved by the concerned operating administration before you implement them. Once approved, they become part of your DBE program.

[64 FR 5126, Feb. 2, 1999, as amended at 89 FR 24966, Apr. 9, 2024]

§ 26.37 What are a recipient's responsibilities for monitoring?

- (a) A recipient must implement appropriate mechanisms to ensure compliance with the requirements in this part by all program participants (e.g., applying legal and contract remedies available under Federal, State, and local law). The recipient must set forth these mechanisms in its DBE program.
- (b) A recipient's DBE program must also include a monitoring and enforcement mechanism to ensure that work committed, or in the case of race-neutral participation, the work subcontracted, to all DBEs at contract award or subsequently is performed by the DBEs to which the work was committed or subcontracted to, and such work is counted according to the requirements of § 26.55. This mechanism must include a written verification that you have reviewed contracting records and monitored the work site to ensure the counting of each DBE's participation is consistent with its function on the contract. The monitoring to which this paragraph (b) refers may be conducted in conjunction with monitoring of contract performance for other purposes such as a commercially useful function review.
- (c) You must effectively implement the following running tally mechanisms:
 - (1) With respect to achieving your overall goal, you must use a running tally that provides for a frequent comparison of cumulative DBE awards/commitments to DOT-assisted prime contract awards to determine whether your current implementation of contract goals is projected to be sufficient to meet your annual goal. This mechanism should inform your decisions to implement goals on contracts to be advertised according to your established contract goal-setting process.
 - (2) With respect to each DBE commitment, you must use a running tally that provides for a frequent comparison of payments made to each listed DBE relative to the progress of work, including payments for such work to the prime contractor to determine whether the contractor is on track with meeting its DBE commitment and whether any projected shortfall exists that requires the prime contractor's good faith efforts to address to meet the contract goal pursuant to § 26.53(g).

[89 FR 24966, Apr. 9, 2024]

§ 26.39 Fostering small business participation.

- (a) Your DBE program must include an element to structure contracting requirements to facilitate competition by small business concerns, taking all reasonable steps to eliminate obstacles to their participation, including unnecessary and unjustified bundling of contract requirements that may preclude small business participation in procurements as prime contractors or subcontractors.
- (b) This element must be submitted to the appropriate DOT operating administration for approval as a part of your DBE program. As part of this program element you may include, but are not limited to, the following strategies:
 - (1) Establishing a race-neutral small business set-aside for prime contracts under a stated amount (e.g., \$1 million).

- (2) In multi-year design-build contracts or other large contracts (e.g., for “megaprojects”) requiring bidders on the prime contract to specify elements of the contract or specific subcontracts that are of a size that small businesses, including DBEs, can reasonably perform.
 - (3) On prime contracts not having DBE contract goals, requiring the prime contractor to provide subcontracting opportunities of a size that small businesses, including DBEs, can reasonably perform, rather than self-performing all the work involved.
 - (4) Identifying alternative acquisition strategies and structuring procurements to facilitate the ability of consortia or joint ventures consisting of small businesses, including DBEs, to compete for and perform prime contracts.
 - (5) To meet the portion of your overall goal you project to meet through race-neutral measures, ensuring that a reasonable number of prime contracts are of a size that small businesses, including DBEs, can reasonably perform.
- (c) You must actively implement your program elements to foster small business participation. Doing so is a requirement of good faith implementation of your DBE program.

[76 FR 5097, Jan. 28, 2011, as amended at 89 FR 24966, Apr. 9, 2024]

Subpart C—Goals, Good Faith Efforts, and Counting

§ 26.41 What is the role of the statutory 10 percent goal in this program?

- (a) The statutes authorizing this program provide that, except to the extent the Secretary determines otherwise, not less than 10 percent of the authorized funds are to be expended with DBEs.
- (b) This 10 percent goal is an aspirational goal at the national level, which the Department uses as a tool in evaluating and monitoring DBEs' opportunities to participate in DOT-assisted contracts.
- (c) The national 10 percent goal does not authorize or require recipients to set overall or contract goals at the 10 percent level, or any other particular level, or to take any special administrative steps if their goals are above or below 10 percent.

§ 26.43 Can recipients use set-asides or quotas as part of this program?

- (a) You are not permitted to use quotas for DBEs on DOT-assisted contracts subject to this part.
- (b) You may not set-aside contracts for DBEs on DOT-assisted contracts subject to this part, except that, in limited and extreme circumstances, you may use set-asides when no other method could be reasonably expected to redress egregious instances of discrimination.

§ 26.45 How do recipients set overall goals?

- (a) **General rule.**
 - (1) Except as provided in paragraph (a)(2) of this section, you must set an overall goal for DBE participation in your DOT-assisted contracts.
 - (2) If you are an FTA Tier II recipient who intends to operate a race-neutral DBE program, or if you are an FAA recipient who reasonably anticipates awarding \$250,000 or less in FAA prime contract funds in a Federal fiscal year, you are not required to develop overall goals for FTA or FAA, respectively, for that Federal fiscal year.

- (b) Your overall goal must be based on demonstrable evidence of the availability of ready, willing and able DBEs relative to all businesses ready, willing and able to participate on your DOT-assisted contracts (hereafter, the "relative availability of DBEs"). The goal must reflect your determination of the level of DBE participation you would expect absent the effects of discrimination. You cannot simply rely on either the 10 percent national goal, your previous overall goal or past DBE participation rates in your program without reference to the relative availability of DBEs in your market.
- (c) **Step 1.** You must begin your goal setting process by determining a base figure for the relative availability of DBEs. The following are examples of approaches that you may take toward determining a base figure. These examples are provided as a starting point for your goal setting process. Any percentage figure derived from one of these examples should be considered a basis from which you begin when examining all evidence available in your jurisdiction. These examples are not intended as an exhaustive list. Other methods or combinations of methods to determine a base figure may be used, subject to approval by the concerned operating administration.
- (1) **Use DBE Directories and Census Bureau Data.** Determine the number of ready, willing and able DBEs in your market from your DBE directory. Using the Census Bureau's County Business Pattern (CBP) data base, determine the number of all ready, willing and able businesses available in your market that perform work in the same NAICS codes. (Information about the CBP data base may be obtained from the Census Bureau at their web site, <https://www.census.gov/programs-surveys/cbp.html>;) Divide the number of DBEs by the number of all businesses to derive a base figure for the relative availability of DBEs in your market.
 - (2) **Use a bidders list.** Determine the number of DBEs that have bid or quoted (successful and unsuccessful) on your DOT-assisted prime contracts or subcontracts in the past three years. Determine the number of all businesses that have bid or quoted (successful and unsuccessful) on prime or subcontracts in the same time period. Divide the number of DBE bidders and quoters by the number of all businesses to derive a base figure for the relative availability of DBEs in your market. When using this approach, you must establish a mechanism (documented in your goal submission) to directly capture data on DBE and non-DBE prime and subcontractors that submitted bids or quotes on your DOT-assisted contracts.
 - (3) **Use data from a disparity study.** Use a percentage figure derived from data in a valid, applicable disparity study.
 - (4) **Use the goal of another DOT recipient.** If another DOT recipient in the same, or substantially similar, market has set an overall goal in compliance with this rule, you may use that goal as a base figure for your goal.
 - (5) **Alternative methods.** Except as otherwise provided in this paragraph, you may use other methods to determine a base figure for your overall goal. Any methodology you choose must be based on demonstrable evidence of local market conditions and be designed to ultimately attain a goal that is rationally related to the relative availability of DBEs in your market. The exclusive use of a list of prequalified contractors or plan holders, or a bidders list that does not comply with the requirements of paragraph (c)(2) of this section, is not an acceptable alternative means of determining the availability of DBEs.
- (d) **Step 2.** Once you have calculated a base figure, you must examine all of the evidence available in your jurisdiction to determine what adjustment, if any, is needed to the base figure to arrive at your overall goal. If the evidence does not suggest an adjustment is necessary, then no adjustment shall be made.

- (1) There are many types of evidence that must be considered when adjusting the base figure. These include:
 - (i) The current capacity of DBEs to perform work in your DOT-assisted contracting program, as measured by the volume of work DBEs have performed in recent years;
 - (ii) Evidence from disparity studies conducted anywhere within your jurisdiction, to the extent it is not already accounted for in your base figure; and
 - (iii) If your base figure is the goal of another recipient, you must adjust it for differences in your local market and your contracting program.
 - (2) If available, you must consider evidence from related fields that affect the opportunities for DBEs to form, grow and compete. These include, but are not limited to:
 - (i) Statistical disparities in the ability of DBEs to get the financing, bonding and insurance required to participate in your program;
 - (ii) Data on employment, self-employment, education, training and union apprenticeship programs, to the extent you can relate it to the opportunities for DBEs to perform in your program.
 - (3) If you attempt to make an adjustment to your base figure to account for the continuing effects of past discrimination (often called the “but for” factor) or the effects of an ongoing DBE program, the adjustment must be based on demonstrable evidence that is logically and directly related to the effect for which the adjustment is sought.
- (e) Once you have determined a percentage figure in accordance with paragraphs (c) and (d) of this section, you should express your overall goal as follows:
- (1) If you are an FHWA recipient, as a percentage of all Federal-aid highway funds you will expend in FHWA-assisted contracts in the forthcoming three fiscal years.
 - (2) If you are an FTA or FAA recipient, as a percentage of all FT or FAA funds (exclusive of FTA funds to be used for the purchase of transit vehicles) that you will expend in FTA or FAA-assisted contracts in the three forthcoming fiscal years.
 - (3) In appropriate cases, the FHWA, FTA or FAA Administrator may permit or require you to express your overall goal as a percentage of funds for a particular grant or project or group of grants and/or projects, including entire projects. Like other overall goals, a project goal may be adjusted to reflect changed circumstances, with the concurrence of the appropriate operating administration.
 - (i) A project goal is an overall goal, and must meet all the substantive and procedural requirements of this section pertaining to overall goals.
 - (ii) A project goal covers the entire length of the project to which it applies.
 - (iii) The project goal should include a projection of the DBE participation anticipated to be obtained during each fiscal year covered by the project goal.
 - (iv) The funds for the project to which the project goal pertains are separated from the base from which your regular overall goal, applicable to contracts not part of the project covered by a project goal, is calculated.

(f)

(1)

- (i) If you set your overall goal on a fiscal year basis, you must submit it to the applicable DOT operating administration by August 1 at three-year intervals, based on a schedule established by the FHWA, FTA, or FAA, as applicable, and posted on that agency's website.
 - (ii) You may adjust your three-year overall goal during the three-year period to which it applies, in order to reflect changed circumstances. You must submit such an adjustment to the concerned operating administration for review and approval.
 - (iii) The operating administration may direct you to undertake a review of your goal if necessary to ensure that the goal continues to fit your circumstances appropriately.
 - (iv) While you are required to submit an overall goal to FHWA, FTA, or FAA only every three years, the overall goal and the provisions of Sec. 26.47(c) apply to each year during that three-year period.
 - (v) You may make, for informational purposes, projections of your expected DBE achievements during each of the three years covered by your overall goal. However, it is the overall goal itself, and not these informational projections, to which the provisions of section 26.47(c) of this part apply.
- (2) If you are a recipient and set your overall goal on a project or grant basis as provided in paragraph (e)(3) of this section, you must submit the goal for review at a time determined by the FHWA, FTA or FAA Administrator, as applicable.
- (3) You must include with your overall goal submission a description of the methodology you used to establish the goal, including your base figure and the evidence with which it was calculated, and the adjustments you made to the base figure and the evidence you relied on for the adjustments. You should also include a summary listing of the relevant available evidence in your jurisdiction and, where applicable, an explanation of why you did not use that evidence to adjust your base figure. You must also include your projection of the portions of the overall goal you expect to meet through race-neutral and race-conscious measures, respectively (see § 26.51(c)).
- (4) You are not required to obtain prior operating administration concurrence with your overall goal. However, if the operating administration's review suggests that your overall goal has not been correctly calculated or that your method for calculating goals is inadequate, the operating administration may, after consulting with you, adjust your overall goal or require that you do so. The adjusted overall goal is binding on you. In evaluating the adequacy or soundness of the methodology used to derive the overall goal, the operating administration will be guided by goal setting principles and best practices identified by the Department in guidance issued pursuant to § 26.9.
- (5) If you need additional time to collect data or take other steps to develop an approach to setting overall goals, you may request the approval of the concerned operating administration for an interim goal and/or goal-setting mechanism. Such a mechanism must:
- (i) Reflect the relative availability of DBEs in your local market to the maximum extent feasible given the data available to you; and
 - (ii) Avoid imposing undue burdens on non-DBEs.
- (6) Timely submission and operating administration approval of your overall goal is a condition of eligibility for DOT financial assistance.

- (7) If you fail to establish and implement goals as provided in this section, you are not in compliance with this part. If you establish and implement goals in a way different from that provided in this part, you are not in compliance with this part. If you fail to comply with this requirement, you are not eligible to receive DOT financial assistance.

(g)

- (1) In establishing an overall goal, you must provide for consultation and publication. This includes:

(i) Consultation with minority, women's and general contractor groups, community organizations, and other officials or organizations which could be expected to have information concerning the availability of disadvantaged and non-disadvantaged businesses, the effects of discrimination on opportunities for DBEs, and your efforts to establish a level playing field for the participation of DBEs. The consultation must include a scheduled, direct, interactive exchange (e.g., a face-to-face meeting, video conference, teleconference) with as many interested stakeholders as possible focused on obtaining information relevant to the goal setting process, and it must occur before you are required to submit your methodology to the operating administration for review pursuant to paragraph (f) of this section. You must document in your goal submission the consultation process you engaged in. Notwithstanding paragraph (f)(4) of this section, you may not implement your proposed goal until you have complied with this requirement.

(ii) A published notice announcing your proposed overall goal before submission to the operating administration on August 1st. The notice must be posted on your official Internet Web site and may be posted in any other sources (e.g., minority-focused media, trade association publications). If the proposed goal changes following review by the operating administration, the revised goal must be posted on your official Internet Web site.

- (2) At your discretion, you may inform the public that the proposed overall goal and its rationale are available for inspection during normal business hours at your principal office and for a 30-day comment period. Notice of the comment period must include addresses to which comments may be sent. The public comment period will not extend the August 1st deadline set in paragraph (f) of this section.

(h) Your overall goals must provide for participation by all certified DBEs and must not be subdivided into group-specific goals.

[64 FR 5126, Feb. 2, 1999, as amended at 64 FR 34570, June 28, 1999; 65 FR 68951, Nov. 15, 2000; 68 FR 35553, June 16, 2003; 75 FR 5536, Feb. 3, 2010; 76 FR 5097, Jan. 28, 2011; 79 FR 59593, Oct. 2, 2014; 89 FR 24966, Apr. 9, 2024; 89 FR 55089, July 3, 2024]

§ 26.47 Can recipients be penalized for failing to meet overall goals?

- (a) You cannot be penalized, or treated by the Department as being in noncompliance with this rule, because your DBE participation falls short of your overall goal, unless you have failed to administer your program in good faith.
- (b) If you do not have an approved DBE program or overall goal, or if you fail to implement your program in good faith, you are in noncompliance with this part.

- (c) If the awards and commitments shown on your Uniform Report of Awards or Commitments and Payments at the end of any fiscal year are less than the overall goal applicable to that fiscal year, you must do the following in order to be regarded by the Department as implementing your DBE program in good faith:
- (1) Analyze in detail the reasons for the difference between the overall goal and your awards and commitments in that fiscal year;
 - (2) Establish specific steps and milestones to correct the problems you have identified in your analysis and to enable you to meet fully your goal for the new fiscal year;
 - (3)
 - (i) If you are a state highway agency; one of the 50 largest transit authorities as determined by the FTA; or an CORE 30 airport or other airport designated by the FAA, you must submit, within 90 days of the end of the fiscal year, the analysis and corrective actions developed under paragraphs (c)(1) and (2) of this section to the appropriate operating administration for approval. If the operating administration approves the report, you will be regarded as complying with the requirements of this section for the remainder of the fiscal year.
 - (ii) As a transit authority or airport not meeting the criteria of paragraph (c)(3)(i) of this section, you must retain analysis and corrective actions in your records for three years and make it available to FTA or FAA on request for their review.
 - (4) FHWA, FTA, or FAA may impose conditions on the recipient as part of its approval of the recipient's analysis and corrective actions including, but not limited to, modifications to your overall goal methodology, changes in your race-conscious/race-neutral split, or the introduction of additional race-neutral or race-conscious measures.
 - (5) You may be regarded as being in noncompliance with this Part, and therefore subject to the remedies in § 26.103 or § 26.105 of this part and other applicable regulations, for failing to implement your DBE program in good faith if any of the following things occur:
 - (i) You do not submit your analysis and corrective actions to FHWA, FTA, or FAA in a timely manner as required under paragraph (c)(3) of this section;
 - (ii) FHWA, FTA, or FAA disapproves your analysis or corrective actions; or
 - (iii) You do not fully implement the corrective actions to which you have committed or conditions that FHWA, FTA, or FAA has imposed following review of your analysis and corrective actions.
- (d) If, as recipient, your Uniform Report of DBE Awards or Commitments and Payments or other information coming to the attention of FTA, FHWA, or FAA, demonstrates that current trends make it unlikely that you will achieve DBE awards and commitments that would be necessary to allow you to meet your overall goal at the end of the fiscal year, FHWA, FTA, or FAA, as applicable, may require you to make further good faith efforts, such as by modifying your race-conscious/race-neutral split or introducing additional race-neutral or race-conscious measures for the remainder of the fiscal year.

[64 FR 5126, Feb. 2, 1999, as amended at 76 FR 5098, Jan. 28, 2011; 89 FR 24966, Apr. 9, 2024]

§ 26.49 What are the requirements for transit vehicle manufactures (TVMs) and for awarding DOT-assisted contracts to TVMs?

- (a) If you are an FTA recipient, you must require in your DBE program that each TVM, as a condition of being authorized to bid or propose on FTA assisted transit vehicle procurements, certify that it has complied with the requirements of this section. You do not include FTA assistance used in transit vehicle procurements in the base amount from which your overall goal is calculated.
 - (1) Only those TVMs listed on FTA's list of eligible TVMs, or that have submitted a goal methodology to FTA that has been approved or has not been disapproved at the time of solicitation are eligible to bid.
 - (2) A TVM that fails to follow the requirements of this section and this part will be deemed as non-compliant, which will result in removal from FTA's eligible TVMs list and ineligibility to bid.
 - (3) An FTA recipient's failure to comply with the requirements set forth in paragraph (a) of this section may result in formal enforcement action or appropriate sanction as determined by FTA (e.g., FTA declining to participate in the vehicle procurement).
 - (4) Within 30 days of becoming contractually required to procure a transit vehicle, an FTA recipient must report to FTA:
 - (i) The name of the TVM that was the successful bidder; and
 - (ii) The Federal share of the contractual commitment at that time.
- (b) If you are a TVM, you must establish and submit to FTA an annual overall percentage goal for DBE participation.
 - (1) In setting your overall goal, you should be guided, to the extent applicable, by the principles underlying § 26.45. The base from which you calculate this goal is the amount of FTA financial assistance included in transit vehicle contracts on which you will bid on during the fiscal year in question, less the portion(s) attributable to the manufacturing process performed entirely by your own forces.
 - (i) You must consider and include in your base figure all domestic contracting opportunities made available to non-DBEs.
 - (ii) You must exclude from this base figure funds attributable to work performed outside the United States and its territories, possessions, and commonwealths.
 - (iii) In establishing an overall goal, you must provide for public participation. This includes consultation with interested parties consistent with § 26.45(g).
 - (2) The requirements of this part with respect to submission and approval of overall goals apply to you as they do to recipients, except that TVMs set and submit their goals annually and not on a triennial basis.
- (c) TVMs must comply with the reporting requirements of § 26.11, including the requirement to submit the Uniform Report of DBE Awards or Commitments and Payments, in order to remain eligible to bid on FTA assisted transit vehicle procurements.
- (d) TVMs must implement all other requirements of this part, except those relating to UCPs and DBE certification procedures.

- (e) If you are an FHWA or FAA recipient, you may, with FHWA or FAA approval, use the procedures of this section with respect to procurements of vehicles or specialized equipment. If you choose to do so, then the manufacturers of the equipment must meet the same requirements (including goal approval by FHWA or FAA) that TVMs must meet in FTA assisted procurements.
- (f) Recipients may establish project-specific goals for DBE participation in the procurement of transit vehicles from specialized manufacturers when a TVM cannot be identified.
 - (1) Project-specific goals established pursuant to this section are subject to the same review and approval and must be established as prescribed in the project goal provisions of § 26.45.
 - (2) FTA must approve the decision to use a project goal before the recipient issues a public solicitation for the vehicles in question.
 - (3) To support the request to develop a project goal, recipients must demonstrate that no TVMs are available to manufacture the vehicle.

[89 FR 24966, Apr. 9, 2024]

§ 26.51 What means do recipients use to meet overall goals?

- (a) You must meet the maximum feasible portion of your overall goal by using race-neutral means of facilitating race-neutral DBE participation. Race-neutral DBE participation includes any time a DBE wins a prime contract through customary competitive procurement procedures or is awarded a subcontract on a prime contract that does not carry a DBE contract goal.
- (b) Race-neutral means include, but are not limited to, the following:
 - (1) Arranging solicitations, times for the presentation of bids, quantities, specifications, and delivery schedules in ways that facilitate participation by DBEs and other small businesses and by making contracts more accessible to small businesses, by means such as those provided under § 26.39 of this part.
 - (2) Providing assistance in overcoming limitations such as inability to obtain bonding or financing (e.g., by such means as simplifying the bonding process, reducing bonding requirements, eliminating the impact of surety costs from bids, and providing services to help DBEs, and other small businesses, obtain bonding and financing);
 - (3) Providing technical assistance and other services;
 - (4) Carrying out information and communications programs on contracting procedures and specific contract opportunities (e.g., ensuring the inclusion of DBEs, and other small businesses, on recipient mailing lists for bidders; ensuring the dissemination to bidders on prime contracts of lists of potential subcontractors; provision of information in languages other than English, where appropriate);
 - (5) Implementing a supportive services program to develop and improve immediate and long-term business management, record keeping, and financial and accounting capability for DBEs and other small businesses;
 - (6) Providing services to help DBEs, and other small businesses, improve long-term development, increase opportunities to participate in a variety of kinds of work, handle increasingly significant projects, and achieve eventual self-sufficiency;

- (7) Establishing a program to assist new, start-up firms, particularly in fields in which DBE participation has historically been low;
 - (8) Ensuring distribution of your DBE directory, through print and electronic means, to the widest feasible universe of potential prime contractors; and
 - (9) Assisting DBEs, and other small businesses, to develop their capability to utilize emerging technology and conduct business through electronic media.
- (c) Each time you submit your overall goal for review by the concerned operating administration, you must also submit your projection of the portion of the goal that you expect to meet through race-neutral means and your basis for that projection. This projection is subject to approval by the concerned operating administration, in conjunction with its review of your overall goal.
- (d) You must establish contract goals to meet any portion of your overall goal you do not project being able to meet using race-neutral means.
- (e) The following provisions apply to the use of contract goals:
- (1) You may use contract goals only on those DOT-assisted contracts that have subcontracting possibilities.
 - (2) You are not required to set a contract goal on every DOT-assisted contract. You are not required to set each contract goal at the same percentage level as the overall goal. The goal for a specific contract may be higher or lower than that percentage level of the overall goal, depending on such factors as the type of work involved, the location of the work, and the availability of DBEs for the work of the particular contract. However, over the period covered by your overall goal, you must set contract goals so that they will cumulatively result in meeting any portion of your overall goal you do not project being able to meet through the use of race-neutral means.
 - (3) Operating administration approval of each contract goal is not necessarily required. However, operating administrations may review and approve or disapprove any contract goal you establish.
 - (4) Your contract goals must provide for participation by all certified DBEs and must not be subdivided into group-specific goals.
- (f) To ensure that your DBE program continues to be narrowly tailored to overcome the effects of discrimination, you must adjust your use of contract goals as follows:
- (1) If your approved projection under paragraph (c) of this section estimates that you can meet your entire overall goal for a given year through race-neutral means, you must implement your program without setting contract goals during that year, unless it becomes necessary in order meet your overall goal.

Example to paragraph (f)(1): Your overall goal for Year 1 is 12 percent. You estimate that you can obtain 12 percent or more DBE participation through the use of race-neutral measures, without any use of contract goals. In this case, you do not set any contract goals for the contracts that will be performed in Year 1. However, if part way through Year 1, your DBE awards or commitments are not at a level that would permit you to achieve your overall goal for Year 1, you could begin setting race-conscious DBE contract goals during the remainder of the year as part of your obligation to implement your program in good faith.

- (2) If, during the course of any year in which you are using contract goals, you determine that you will exceed your overall goal, you must reduce or eliminate the use of contract goals to the extent necessary to ensure that the use of contract goals does not result in exceeding the overall goal. If you determine that you will fall short of your overall goal, then you must make appropriate modifications in your use of race-neutral and/or race-conscious measures to allow you to meet the overall goal.

Example to paragraph (f)(2): In Year II, your overall goal is 12 percent. You have estimated that you can obtain 5 percent DBE participation through use of race-neutral measures. You therefore plan to obtain the remaining 7 percent participation through use of DBE goals. By September, you have already obtained 11 percent DBE participation for the year. For contracts let during the remainder of the year, you use contract goals only to the extent necessary to obtain an additional one percent DBE participation. However, if you determine in September that your participation for the year is likely to be only 8 percent total, then you would increase your use of race-neutral and/or race-conscious means during the remainder of the year in order to achieve your overall goal.

- (3) If the DBE participation you have obtained by race-neutral means alone meets or exceeds your overall goals for two consecutive years, you are not required to make a projection of the amount of your goal you can meet using such means in the next year. You do not set contract goals on any contracts in the next year. You continue using only race-neutral means to meet your overall goals unless and until you do not meet your overall goal for a year.

Example to paragraph (f)(3): Your overall goal for Years I and Year II is 10 percent. The DBE participation you obtain through race-neutral measures alone is 10 percent or more in each year. (For this purpose, it does not matter whether you obtained additional DBE participation through using contract goals in these years.) In Year III and following years, you do not need to make a projection under paragraph (c) of this section of the portion of your overall goal you expect to meet using race-neutral means. You simply use race-neutral means to achieve your overall goals. However, if in Year VI your DBE participation falls short of your overall goal, then you must make a paragraph (c) projection for Year VII and, if necessary, resume use of contract goals in that year.

- (4) If you obtain DBE participation that exceeds your overall goal in two consecutive years using contract goals (i.e., not through the use of race-neutral means alone), you must reduce your use of contract goals proportionately in the following year.

Example to paragraph (f)(4): In Years I and II, your overall goal is 12 percent, and you obtain 14 and 16 percent DBE participation, respectively. You have exceeded your goals over the two-year period by an average of 25 percent. In Year III, your overall goal is again 12 percent, and your paragraph (c) projection estimates that you will obtain 4 percent DBE participation through race-neutral means and 8 percent through contract goals. You then reduce the contract goal projection by 25 percent (i.e., from 8 to 6 percent) and set contract goals accordingly during the year. If in Year III you obtain 11 percent participation, you do not use this contract goal adjustment mechanism for Year IV, because there have not been two consecutive years of exceeding overall goals.

- (g) In any year in which you project meeting part of your goal through race-neutral means and the remainder through contract goals, you must maintain data separately on DBE achievements in those contracts with and without contract goals, respectively. You must report this data to the concerned operating administration as provided in § 26.11.

[64 FR 5126, Feb. 2, 1999, as amended at 76 FR 5098, Jan. 28, 2011; 79 FR 59595, Oct. 2, 2014; 89 FR 24967, Apr. 9, 2024]

§ 26.53 What are the good faith efforts procedures recipients follow in situations where there are contract goals?

- (a) When you have established a DBE contract goal, you must award the contract only to a bidder/offeror who makes good faith efforts to meet it. You must determine that a bidder/offeror has made good faith efforts if the bidder/offeror does either of the following things:
 - (1) Documents that it has obtained enough DBE participation to meet the goal; or
 - (2) Documents that it made adequate good faith efforts to meet the goal, even though it did not succeed in obtaining enough DBE participation to do so. If the bidder/offeror does document adequate good faith efforts, you must not deny award of the contract on the basis that the bidder/offeror failed to meet the goal. See Appendix A of this part for guidance in determining the adequacy of a bidder/offeror's good faith efforts.
- (b) In your solicitations for DOT-assisted contracts for which a contract goal has been established, you must require the following:
 - (1) Award of the contract will be conditioned on meeting the requirements of this section;
 - (2) All bidders or offerors will be required to submit the following information to the recipient, at the time provided in paragraph (b)(3) of this section:
 - (i) The names and addresses of DBE firms that will participate in the contract;
 - (ii) A description of the work that each DBE will perform. To count toward meeting a goal, each DBE firm must be certified in a NAICS code applicable to the kind of work the firm would perform on the contract;
 - (iii) The dollar amount of the participation of each DBE firm participating;
 - (iv) Written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet a contract goal; and
 - (v) 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. Each DBE listed to perform work as a regular dealer or distributor must confirm its participation according to the requirements of paragraph (c)(1) of this section.
 - (vi) If the contract goal is not met, evidence of good faith efforts (see Appendix A of this part). 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; and
 - (3)
 - (i) At your discretion, the bidder/offeror must present the information required by paragraph (b)(2) of this section—
 - (A) Under sealed bid procedures, as a matter of responsiveness, or with initial proposals, under contract negotiation procedures; or

- (B) No later than 7 days after bid opening as a matter of responsibility. The 7 days shall be reduced to 5 days beginning January 1, 2017.
 - (ii) Provided that, in a negotiated procurement, such as a procurement for professional services, the bidder/offeror may make a contractually binding commitment to meet the goal at the time of bid submission or the presentation of initial proposals but provide the information required by paragraph (b)(2) of this section before the final selection for the contract is made by the recipient. This paragraph (b)(3)(ii) does not apply to a design-build procurement, which must follow the provisions in paragraph (e) of this section.
- (c) You must make sure all information is complete and accurate and adequately documents the bidder/offeror's good faith efforts before committing yourself to the performance of the contract by the bidder/offeror.
 - (1) For each DBE listed as a regular dealer or distributor you must make a preliminary counting determination to assess its eligibility for 60 or 40 percent credit, respectively, of the cost of materials and supplies based on its demonstrated capacity and intent to perform as a regular dealer or distributor, as defined in § 26.55(e)(2)(iv)(A), (B), and (C) and (e)(3) under the contract at issue. Your preliminary determination shall be made based on the DBE's written responses to relevant questions and its affirmation that its subsequent performance of a commercially useful function will be consistent with the preliminary counting of such participation. Where the DBE supplier does not affirm that its participation will meet the specific requirements of either a regular dealer or distributor, you are required to make appropriate adjustments in counting such participation toward the bidder's good faith efforts to meet the contract goal. The bidder is responsible for verifying that the information provided by the DBE supplier is consistent with the counting of such participation toward the contract goal.
 - (2) [Reserved]
- (d) If you determine that the apparent successful bidder/offeror has failed to meet the requirements of paragraph (a) of this section, you must, before awarding the contract, provide the bidder/offeror an opportunity for administrative reconsideration.
 - (1) As part of this reconsideration, the bidder/offeror must have the opportunity to provide written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so.
 - (2) Your decision on reconsideration must be made by an official who did not take part in the original determination that the bidder/offeror failed to meet the goal or make adequate good faith efforts to do so.
 - (3) The bidder/offeror must have the opportunity to meet in person with your reconsideration official to discuss the issue of whether it met the goal or made adequate good faith efforts to do so.
 - (4) You must send the bidder/offeror a written decision on reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so.
 - (5) The result of the reconsideration process is not administratively appealable to the Department of Transportation.
- (e) In a design-build contracting situation, in which the recipient solicits proposals to design and build a project with minimal-project details at time of letting, the recipient may set a DBE goal that proposers must meet by submitting a DBE Open-Ended DBE Performance Plan (OEPP) with the proposal. The OEPP

replaces the requirement to provide the information required in paragraph (b) of this section that applies to design-bid-build contracts. To be considered responsive, the OEPP must include a commitment to meet the goal and provide details of the types of subcontracting work or services (with projected dollar amount) that the proposer will solicit DBEs to perform. The OEPP must include an estimated time frame in which actual DBE subcontracts would be executed. Once the design-build contract is awarded, the recipient must provide ongoing monitoring and oversight to evaluate whether the design-builder is using good faith efforts to comply with the OEPP and schedule. The recipient and the design-builder may agree to make written revisions of the OEPP throughout the life of the project, e.g., replacing the type of work items the design-builder will solicit DBEs to perform and/or adjusting the proposed schedule, as long as the design-builder continues to use good faith efforts to meet the goal.

(f)

(1)

(i) You must require that a prime contractor not terminate a DBE or any portion of its work listed in response to paragraph (b)(2) of this section (or an approved substitute DBE firm per paragraph (g) of this section) without your prior written consent, unless you cause the termination or reduction. A termination includes any reduction or underrun in work listed for a DBE not caused by a material change to the prime contract by the recipient. This requirement applies to instances that include, but are not limited to, when a 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.

(ii) You must include in each prime contract a provision stating that:

(A) The contractor must utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains your written consent as provided in this paragraph (f); and

(B) Unless your consent is provided under this paragraph (f), the prime contractor must not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

(2) You may provide such written consent only if you agree, for reasons stated in your concurrence document, that the prime contractor has good cause to terminate the listed DBE or any portion of its work.

(3) Good cause does not exist if the prime contractor seeks to terminate a DBE or any portion of its work that it relied upon to obtain the contract so that the prime contractor can self-perform the work for which the DBE contractor was engaged, or so that the prime contractor can substitute another DBE or non-DBE contractor after contract award. For purposes of this paragraph (f)(3), good cause includes the following circumstances:

(i) The listed DBE subcontractor fails or refuses to execute a written contract;

(ii) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;

(iii) The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;

- (iv) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
 - (v) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR parts 180, 215, and 1200 or applicable State law;
 - (vi) You have determined that the listed DBE subcontractor is not a responsible contractor;
 - (vii) The listed DBE subcontractor voluntarily withdraws from the project and provides to you written notice of its withdrawal;
 - (viii) The listed DBE is ineligible to receive DBE credit for the type of work required;
 - (ix) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract; and
 - (x) Other documented good cause that you determine compels the termination of the DBE subcontractor.
- (4) Before transmitting to you its request to terminate a DBE subcontractor or any portion of its work, the prime contractor must give notice in writing to the DBE subcontractor, with a copy to you sent concurrently, of its intent to request to terminate and the reason for the proposed request.
- (5) The prime contractor's written notice must give the DBE 5 days to respond, advising you and the contractor of the reasons, if any, why it objects to the proposed termination of its subcontract/or portion thereof and why you should not approve the prime contractor's request. If required in a particular case as a matter of public necessity (e.g., safety), you may provide a response period shorter than 5 days.
- (6) In addition to post-award terminations, the provisions of this section apply to pre-award deletions or changes to DBEs or their listed work put forward by offerors in negotiated procurements.
- (g) When a DBE subcontractor or any portion of its work is terminated by the prime contractor as provided in paragraph (f) of this section, or the firm fails to complete its work on the contract for any reason, including when work committed to a DBE is not countable or reduced due to overestimations made prior to award, the prime contractor must use good faith efforts to include additional DBE participation to the extent needed to meet the contract goal. The good faith efforts shall be documented by the contractor. If the recipient requests documentation under this provision, the contractor shall submit the documentation within 7 days, which may be extended for an additional 7 days, if necessary, at the request of the contractor, and the recipient shall provide a written determination to the contractor stating whether or not good faith efforts have been demonstrated.
- (h) You must include in each prime contract the contract clause required by § 26.13(b) stating that failure by the contractor to carry out the requirements of this part is a material breach of the contract and may result in the termination of the contract or such other remedies set forth in that section you deem appropriate if the prime contractor fails to comply with the requirements of this section.
- (i) You must apply the requirements of this section to DBE bidders/offerors for prime contracts. In determining whether a DBE bidder/offeror for a prime contract has met a contract goal, you count the work the DBE has committed to performing with its own forces as well as the work that it has committed to be performed by DBE subcontractors and DBE suppliers.

- (j) You must require the contractor awarded the contract to make available upon request a copy of all DBE subcontracts. The subcontractor shall ensure that all subcontracts or an agreement with DBEs to supply labor or materials require that the subcontract and all lower tier subcontractors be performed in accordance with this part's provisions.

[64 FR 5126, Feb. 2, 1999, as amended at 76 FR 5098, Jan. 28, 2011; 79 FR 59595, Oct. 2, 2014; 89 FR 24967, Apr. 9, 2024; 89 FR 55089, July 3, 2024]

§ 26.55 How is DBE participation counted toward goals?

- (a) When a DBE participates in a contract, you count only the value of the work performed by the DBE toward DBE goals.
 - (1) Count the entire amount of that portion of a construction contract (or other contract not covered by paragraph (a)(2) of this section) that is performed by the DBE's own forces. Include the cost of supplies and materials obtained by the DBE for the work of the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate).
 - (2) Count the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, toward DBE goals, provided you determine the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services.
 - (3) When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.
- (b) When a DBE performs as a participant in a joint venture, count a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces toward DBE goals.
- (c) Count expenditures to a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract.
 - (1) A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, you must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is performing and the DBE credit claimed for its performance of the work, and other relevant factors.
 - (2) A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, you must examine similar transactions, particularly those in which DBEs do not participate.

- (3) If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected within normal industry practice for the type of work involved, you must presume that it is not performing a commercially useful function.
 - (4) When a DBE is presumed not to be performing a commercially useful function as provided in paragraph (c)(3) of this section, the DBE may present evidence to rebut this presumption. You may determine that the firm is performing a commercially useful function given the type of work involved and normal industry practices.
 - (5) Your decisions on commercially useful function matters are subject to review by the concerned operating administration, but are not administratively appealable to DOT.
- (d) Use the following factors in determining whether a DBE trucking company is performing a commercially useful function:
- (1) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
 - (2) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
 - (3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
 - (4) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (5) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE that leases trucks equipped with drivers from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE leased trucks equipped with drivers not to exceed the value of transportation services on the contract provided by DBE-owned trucks or leased trucks with DBE employee drivers. Additional participation by non-DBE owned trucks equipped with drivers receives credit only for the fee or commission it receives as a result of the lease arrangement. If a recipient chooses this approach, it must obtain written consent from the appropriate DOT operating administration.

Example to paragraph (d)(5): DBE Firm X uses two of its own trucks on a contract. It leases two trucks from DBE Firm Y and six trucks equipped with drivers from non-DBE Firm Z. DBE credit would be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four of the six trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight trucks. DBE credit could be awarded only for the fees or commissions pertaining to the remaining trucks Firm X receives as a result of the lease with Firm Z.

- (6) The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE truck leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.

Example to paragraph (d)(6): DBE Firm X uses two of its own trucks on a contract. It leases two additional trucks from non-DBE Firm Z. Firm X uses its own employees to drive the trucks leased from Firm Z. DBE credit would be awarded for the total value of the transportation services provided by all four trucks.

- (7) For purposes of this paragraph (d), a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

(e) Count expenditures with DBEs for materials or supplies toward DBE goals as provided in the following:

(1)

- (i) If the materials or supplies are obtained from a DBE manufacturer, count 100 percent of the cost of the materials or supplies.
- (ii) For purposes of this paragraph (e)(1), a manufacturer is a firm that owns (or leases) and operates a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications. Manufacturing includes blending or modifying raw materials or assembling components to create the product to meet contract specifications. When a DBE makes minor modifications to the materials, supplies, articles, or equipment, the DBE is not a manufacturer. Minor modifications are additional changes to a manufactured product that are small in scope and add minimal value to the final product.

(2)

- (i) If the materials or supplies are purchased from a DBE regular dealer, count 60 percent of the cost of the materials or supplies (including transportation costs).
- (ii) For purposes of this section, a regular dealer is a firm that owns (or leases) and operates, a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in sufficient quantities, and regularly sold or leased to the public in the usual course of business.
- (iii) Items kept and regularly sold by the DBE are of the "general character" when they share the same material characteristics and application as the items specified by the contract.
- (iv) You must establish a system to determine that a DBE regular dealer per paragraph (e)(2)(iv)(A) of this section, over a reasonable period of time, keeps sufficient quantities and regularly sells the items in question. This system must also ensure that a regular dealer of bulk items per (e)(2)(iv)(B) of this section owns/leases and operates distribution equipment for the products it sells. This requirement may be administered through questionnaires, inventory records reviews, or other methods to determine whether each DBE supplier has the demonstrated capacity to perform a commercially useful function (CUF) as a regular dealer prior to its participation. The system you implement must be maintained and used to identify all DBE suppliers with capacity to be eligible for 60 percent credit, contingent upon the performance of a CUF. This requirement is a programmatic safeguard apart from that described in § 26.53(c)(1).

- (A) To be a regular dealer, the firm must be an established business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A DBE supplier performs a CUF as a regular dealer and receives credit for 60 percent of the cost of materials or supplies (including transportation cost) when all, or at least 51 percent of, the items under a purchase order or subcontract are provided from the DBE's inventory, and when necessary, any minor quantities delivered from and by other sources are of the general character as those provided from the DBE's inventory.
 - (B) A DBE may be a regular dealer in such bulk items as petroleum products, steel, concrete or concrete products, gravel, stone, or asphalt without owning and operating a place of business as provided in paragraph (e)(2)(ii) of this section if the firm both owns and operates distribution equipment used to deliver the products. Any supplementing of regular dealers' own distribution equipment must be by a long-term operating lease and not on an ad hoc or contract-by-contract basis.
 - (C) A DBE supplier of items that are not typically stocked due to their unique characteristics (e.g., limited shelf life or items ordered to specification) should be considered in the same manner as a regular dealer of bulk items per paragraph (e)(2)(iv)(B) of this section. If the DBE supplier of these items does not own or lease distribution equipment, as described above, it is not a regular dealer.
 - (D) Packagers, brokers, manufacturers' representatives, or other persons who arrange, facilitate, or expedite transactions are not regular dealers within the meaning of paragraph (e)(2) of this section.
- (3) If the materials or supplies are purchased from a DBE distributor that neither maintains sufficient inventory nor uses its own distribution equipment for the products in question, count 40 percent of the cost of materials or supplies (including transportation costs). A DBE distributor is an established business that engages in the regular sale or lease of the items specified by the contract. A DBE distributor assumes responsibility for the items it purchases once they leave the point of origin (e.g., a manufacturer's facility), making it liable for any loss or damage not covered by the carrier's insurance. A DBE distributor performs a CUF when it demonstrates ownership of the items in question and assumes all risk for loss or damage during transportation, evidenced by the terms of the purchase order or a bill of lading (BOL) from a third party, indicating Free on Board (FOB) at the point of origin or similar terms that transfer responsibility of the items in question to the DBE distributor. If these conditions are met, DBE distributors may receive 40 percent for drop-shipped items. Terms that transfer liability to the distributor at the delivery destination (e.g., FOB destination), or deliveries made or arranged by the manufacturer or another seller do not satisfy this requirement.
 - (4) With respect to materials or supplies purchased from a DBE that is neither a manufacturer, a regular dealer, nor a distributor, count the entire amount of fees or commissions charged that you deem to be reasonable, including transportation charges for the delivery of materials or supplies. Do not count any portion of the cost of the materials and supplies themselves.
 - (5) You must determine the amount of credit awarded to a firm for the provisions of materials and supplies (e.g., whether a firm is acting as a regular dealer, distributor, or a transaction facilitator) on a contract-by-contract basis.

- (f) If a firm is not currently certified as a DBE in accordance with the standards of subpart D of this part at the time of the execution of the contract, do not count the firm's participation toward any DBE goals, except as provided for in § 26.87(j)).
- (g) Do not count the dollar value of work performed under a contract with a firm after it has ceased to be certified toward your overall goal.
- (h) Do not count the participation of a DBE subcontractor toward a contractor's final compliance with its DBE obligations on a contract until the contractor has paid the DBE the amount being counted.

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Subpart D—Certification Standards

§ 26.61 Burden of proof

- (a) In determining whether to certify a firm, the certifier must apply the standards of this subpart. Unless the context indicates otherwise, singular terms include their plural forms and vice versa.
- (b) The firm has the burden of demonstrating, by a preponderance of the evidence, *i.e.*, more likely than not, that it satisfies all of the requirements in this subpart. In determining whether the firm has met its burden, the certifier must consider all the information in the record, viewed as a whole.
 - (1) **Exception 1.** In a decertification proceeding the certifier bears the burden of proving, by a preponderance of the evidence, that the firm is no longer eligible for certification under the rules of this part.
 - (2) **Exception 2.** If a certifier has a reasonable basis to believe that an individual who is a member of a group in § 26.67(a) of this section is not, in fact, socially and/or economically disadvantaged, the certifier bears the burden of proving, by a preponderance of the evidence, that the individual is not socially and/or economically disadvantaged.

[89 FR 24969, Apr. 9, 2024]

§ 26.63 General certification rules.

- (a) **General rules.** Except as otherwise provided:
 - (1) The firm must be for-profit and engaged in business activities.
 - (2) In making eligibility determinations, a certifier may not consider whether a firm performs a commercially useful function (CUF), or the potential effect on goals or counting.
 - (3) A certifier cannot condition eligibility on State prequalification requirements for bidding on contracts.
 - (4) Certification is not a warranty of competence or suitability.
 - (5) A certifier determines eligibility based on the evidence it has at the time of its decision, not on the basis of historical or outdated information, giving full effect to the “curative measures” provisions of this part.
 - (6) Entering into a fraudulent transaction or presenting false information to obtain or maintain DBE certification is disqualifying.

- (b) **Indirect ownership.** A subsidiary (i.e., S) that SEDOs own and control indirectly is eligible, if it satisfies the other requirements of this part and only under the following circumstances.
- (1) **Look-through.** SEDOs own at least 51 percent of S through their ownership of P (i.e., the parent firm) as shown in the examples following.
 - (2) **Control.** SEDOs control P, and P controls S.
 - (3) **One tier of separation.** The SEDOs indirectly own S through P and no other intermediary. That is, no applicant or DBE may be more than one entity (P) removed from its individual SEDOs.
 - (4) **Examples.** The following examples assume that S and its SEDOs satisfy all other requirements in this part.
 - (i) **Example 1 to paragraph (b)(4).** SEDOs own 100 percent of P, and P owns 100 percent of S. S is eligible for certification.
 - (ii) **Example 2 to paragraph (b)(4).** Same facts as Example 1, except P owns 51 percent of S. S is eligible.
 - (iii) **Example 3 to paragraph (b)(4).** SEDOs own 80 percent of P, and P owns 70 percent of S. S is eligible because SEDOs indirectly own 56 percent of S. The calculation is 80 percent of 70 percent or $.8 \times .7 = .56$.
 - (iv) **Example 4 to paragraph (b)(4).** SEDOs own and control P, and they own 52 percent of S by operation of this paragraph (b). However, a non-SEDO controls S. S is ineligible.
 - (v) **Example 5 to paragraph (b)(4).** SEDOs own 60 percent of P, and P owns 51 percent of S. S is ineligible because SEDOs own just 31 percent of S.
 - (vi) **Example 6 to paragraph (b)(4).** P indirectly owns and controls S and has other affiliates. S is eligible only if its gross receipts, plus those of all of its affiliates, do not exceed the applicable small business size cap of § 26.65. Note that all of P's affiliates are affiliates of S by virtue of P's ownership and/or control of S.
- (c) **Indian Tribes, NHOs, and ANC's –**
- (1) **Indian Tribes and NHOs.** A firm that is owned by an Indian Tribe or Native Hawaiian organization (NHO), rather than by Indians or Native Hawaiians as individuals, is eligible if it meets all other certification requirements in this part.
 - (2) **Alaska Native Corporations (ANCs).**
 - (i) Notwithstanding any other provisions of this subpart, a subsidiary corporation, joint venture, or partnership entity of an ANC is eligible for certification if it meets all the following requirements:
 - (A) The Settlement Common Stock of the underlying ANC and other stock of the ANC held by holders of the Settlement Common Stock and by Natives and descendants of Natives represents a majority of both the total equity of the ANC and the total voting power of the corporation for purposes of electing directors;

- (B) The shares of stock or other units of common ownership interest in the subsidiary, joint venture, or partnership entity held by the ANC and by holders of its Settlement Common Stock represent a majority of both the total equity of the entity and the total voting power of the entity for the purpose of electing directors, the general partner, or principal officers; and
 - (C) The subsidiary, joint venture, or partnership entity has been certified by the Small Business Administration under the 8(a) or small disadvantaged business program.
- (ii) As a certifier to whom an ANC-related entity applies for certification, a certifier must not use the Uniform Certified Application. The certifier must obtain from the firm documentation sufficient to demonstrate that the entity meets the requirements of paragraph (c)(2)(i) of this section. The certifier must also obtain sufficient information about the firm to allow the certifier to administer its program (e.g., information that would appear in a UCP directory).
 - (iii) If an ANC-related firm does not meet all the conditions of paragraph (c)(2)(i) of this section, then it must meet the requirements of paragraph (c)(1) of this section in order to be certified.

[89 FR 24969, Apr. 9, 2024]

§ 26.65 Business size determinations.

- (a) **By NAICS Code.** A firm (including its affiliates) must be a small business, as defined by the Small Business Administration (SBA). The certifier must apply the SBA business size limit in 13 CFR part 121 which corresponds to the applicable primary industry classifications (NAICS codes). The firm is ineligible when its affiliated “receipts” (computed on a cash basis), as defined in 13 CFR 121.104(a) and averaged over the firm’s preceding five fiscal years, exceed the applicable SBA size cap(s).
- (b) **Statutory cap.** Even if a firm is a small business under paragraph (a) of this section, it is ineligible to perform DBE work on FHWA or FTA assisted contracts if its affiliated annual gross receipts, as defined in 13 CFR 121.104, averaged over the firm’s previous three fiscal years exceed \$30.72 million (as of March 1, 2024). The Department will adjust this amount annually and post the adjusted amount on its website available at <https://www.transportation.gov/DBEsizestandards>.

[89 FR 24970, Apr. 9, 2024; 89 FR 55089, July 3, 2024]

§ 26.67 Social and economic disadvantage.

- (a) **Group membership —**
 - (1) **General rule.** Citizens of the United States (or lawfully admitted permanent residents) who are women, Black American, Hispanic American, Native American, Asian Pacific American, Subcontinent Asian American, or other minorities found to be disadvantaged by the Small Business Administration (SBA), are rebuttably presumed to be socially and economically disadvantaged. A firm owner claiming the presumption must specify of which groups in this paragraph (a)(1) she or he is a member on the Declaration of Eligibility (DOE).

(2) **Native American group membership.** An owner claiming Native American group membership must submit a signed DOE as well as proof of enrollment in a federally or State-recognized Indian Tribe. An owner claiming Native Hawaiian or Alaska Native group membership must submit documentation legally recognized under State or Federal law attesting to the individual's status as a member of that group.

(3) **Questioning group membership.**

(1) Certifiers may not question claims of group membership as a matter of course. Certifiers must not impose a disproportionate burden on members of any particular group. Imposing a disproportionate burden on members of a particular group could violate Title VI of the Civil Rights Act of 1964, paragraph (b) of this section, and/or 49 CFR part 21.

(i) If a certifier has a well-founded reason(s) to question an owner's claim of membership in a group in paragraph (a)(1) of this section, it must provide the individual a written explanation of its reason(s), using the most recent email address provided. The firm bears the burden of proving, by a preponderance of the evidence, that the owner is a member of the group in question.

(ii) A certifier's written explanation must instruct the individual to submit evidence demonstrating that the individual has held herself/himself/themself out publicly as a member of the group for a long period of time prior to applying for DBE certification, and that the relevant community considers the individual a member. The certifier may not require the individual to provide evidence beyond that related to group membership.

(iii) The owner must email the certifier evidence described in paragraph (a)(3)(ii) of this section no later than 20 days after the written explanation. The certifier must email the owner a decision no later than 30 days after receiving timely submitted evidence.

(iv) If a certifier determines that an individual has not demonstrated group membership, the certifier's decision must specifically reference the evidence in the record that formed the basis for the conclusion and give a detailed explanation of why the evidence submitted was insufficient. It must also inform the individual of the right to appeal, as provided in § 26.89(a), and of the right to reapply at any time under paragraph (d) of this section.

(b) **Rebuttal of social disadvantage.**

(1) If a certifier has a reasonable basis to believe that an individual who is a member of a group in paragraph (a)(1) of this section is not, in fact, socially disadvantaged, the certifier must initiate a § 26.87 proceeding, regardless of the firm's DBE status. As is the case in all section § 26.87 proceedings, the certifier must prove ineligibility.

(2) If the certifier finds that the owner is not socially disadvantaged, its decision letter must inform the firm of its appeal rights.

(c) **Rebuttal of economic disadvantage —**

(1) **Personal net worth.** If a certifier has a reasonable basis to believe that an individual who submits a PNW Statement that is below the currently applicable PNW cap is not economically disadvantaged, the certifier may rebut the individual's presumption of economic disadvantage.

- (i) The certifier must not attempt to rebut presumed economic disadvantage as a matter of course and it must avoid imposing unnecessary burdens on individual owners or disproportionately impose them on members of a particular group.
- (ii) The certifier must proceed as provided in § 26.87.

(2) ***Economic disadvantage in fact.***

- (i) To rebut the presumption, the certifier must prove that a reasonable person would not consider the individual economically disadvantaged. The certifier may consider assets and income, free use of them or ready access to their benefits, and any other trappings of wealth that the certifier considers relevant. There are no assets (including retirement assets), income, equity, or other exclusions and no limitations on inclusions. A broad and general analysis suffices in most cases: the owner has, or enjoys the benefits of, income of X; two homes worth approximately Y; substantial interests in outside businesses Q, R, and S; four rental properties of aggregate value Z; etc. The certifier need only demonstrate “ballpark” values based on available evidence. The reasonable person is not party to detailed financial information. S/he considers the owner's overall circumstances and lifestyle.
- (ii) The certifier must proceed as provided in § 26.87.

(d) ***Non-presumptive disadvantage.*** An owner who is not presumed to be SED under paragraph (a) of this section may demonstrate that he is SED based on his own experiences and circumstances that occurred within American society.

- (1) To attempt to prove individual SED, the owner provides the certifier a Personal Narrative (PN) that describes in detail specific acts or omissions by others, which impeded his progress or success in education, employment, and/or business, including obtaining financing on terms available to similarly situated, non-disadvantaged persons.
- (2) The PN must identify at least one objective basis for the detrimental discrimination. The basis may be any identifiable status or condition. The PN must describe this objective distinguishing feature(s) (ODF) in sufficient detail to justify the owner's conclusion that it prompted the prejudicial acts or omissions.
- (3) The PN must state how and to what extent the discrimination caused the owner harm, including a full description of type and magnitude.
- (4) The owner must establish that he is economically disadvantaged in fact and that he is economically disadvantaged relative to similarly situated non-disadvantaged individuals.
- (5) The owner must attach to the PN a current PNW statement and any other financial information he considers relevant.
- (6) This rule does not prescribe how the owner must satisfy his burden of proving disadvantage. He need not, for example, have filed any formal complaint, or prove discrimination under a particular statute.

Example 1 to paragraph (d): A White male claiming to have experienced employment discrimination must provide evidence that his employment status and/or limited opportunities to earn income result from specific prejudicial acts directed at him personally because of an ODF, and not, e.g., an economic recession that caused widespread unemployment.

[89 FR 24970, Apr. 9, 2024; 89 FR 55089, July 3, 2024]

§ 26.68 Personal net worth.

- (a) **General.** An owner whose PNW exceeds \$2,047,000 is not presumed economically disadvantaged. The Department will adjust the PNW cap pursuant to paragraph (d) of this section.
- (b) **Required documents.** Each owner on whom the firm relies for certification must submit a DOE and a corroborating personal net worth (PNW) statement, including required attachments. The owner must report PNW on the form, available at <https://www.Transportation.gov/DBEFORMS>. A certifier may require an owner to provide additional information on a case-by-case basis to verify the accuracy and completeness of the PNW statement. The certifier must have a legitimate and demonstrable need for the additional information.
- (c) **Reporting.** The following rules apply without regard to State community property, equitable distribution, or similar rules. The owner reports assets and liabilities that she owns or is deemed to own. Ownership tracks title to the asset or obligor status on the liability except where otherwise provided or when the transaction results in evasion or abuse.

- (1) The owner excludes her ownership interest in the applicant or DBE.
- (2) The owner excludes her share of the equity in her primary residence. There is no exclusion when the SEDO does not own the home.

Example 1 to paragraph (c)(2): The owner and her spouse hold joint title to their primary residence, for which they paid \$300,000 and are coequal debtors on a bank mortgage and a home equity line of credit with current combined balances of \$150,000. The owner may exclude her \$75,000 share of the \$150,000 of total equity.

- (3) The owner includes the full value of the contents of her primary residence unless she cohabits with a spouse or domestic partner, in which case she excludes only 50 percent of those assets.
- (4) The owner includes the value of all motor vehicles, including watercraft and ATVs, titled in her name or of which she is the principal operator.
- (5) The owner excludes the liabilities of any other party and those contingent on a future event or of undetermined value as of the date of the PNW Statement.
- (6) The owner includes her proportional share of the balance of a debt on which she shares joint and severable liability with other primary debtors.

Example 2 to paragraph (c)(6): When the owner co-signs a debt instrument with two other individuals, the rule considers her liable for one-third of the current loan balance.

- (7) The owner includes assets transferred to relatives or related entities within the two years preceding any UCA or DOE, when the assets so transferred during the period have an aggregate value of more than \$20,000. Relatives include the owner's spouse or domestic partner, children (whether biological, adopted or stepchildren), siblings (including stepsiblings and those of the spouse or domestic partner), and parents (including stepparents and those of the spouse or domestic partner). Related entities include for-profit privately held companies of which any relative is an owner, officer, director, or equivalent; and family or other trusts of which the owner or any relative is grantor, trustee, or beneficiary, except when the transfer is irrevocable.

- (8) The owner excludes direct payments, on behalf of immediate family members or their children, to unrelated providers of healthcare, education, or legal services.
- (9) The owner excludes direct payments to providers of goods and services directly related to a celebration of an immediate family member's or that family member's child's significant, normally non-recurring life event.
- (10) The owner excludes from net worth all assets in qualified retirement accounts but must report those accounts, the value of assets in them, and any significant terms and restrictions concerning the assets' use, to the certifier.

(d) **Regulatory adjustments.**

- (1) The Department will adjust the PNW cap by May 9, 2027 by multiplying \$1,600,000 by the growth in total household net worth since 2019 as described by "Financial Accounts of the United States: Balance Sheet of Households (Supplementary Table B.101.h)" produced by the Board of Governors of the Federal Reserve (<https://www.federalreserve.gov/releases/z1/>), and normalized by the total number of households as collected by the Census in "Families and Living Arrangements" (<https://www.census.gov/topics/families/families-and-households.html>) to account for population growth. The Department will adjust the PNW cap every 3 years on the anniversary of the adjustment date described in this section. The Department will post the adjustments on the Departmental Office of Civil Rights' web page, available at <https://www.Transportation.gov/DBEPNW>. Each such adjustment will become the currently applicable PNW limit for purposes of this regulation.
- (2) The Department will use formula 1 to this paragraph (d)(2) to adjust the PNW limit:

Formula 1 to Paragraph (d)

Future Year PNW Cap	Q1-Q4 Average Household Net Worth of Future Year / Total Households of Future Year
= [\$1,600,000] *	<hr/>
	Q1-Q4 Average Household Net worth of 2019 (\$106,722,704 million / Total Households of 2019 (128,579)

- (e) **Confidentiality.** Notwithstanding any provision of Federal or State law, a certifier must not release an individual's PNW statement nor any documents pertaining to it to any third party without the written consent of the submitter. Provided, that you must transmit this information to DOT in any certification appeal proceeding under § 26.89 or to any other State to which the individual's firm has applied for certification under § 26.85.

[89 FR 24971, Apr. 9, 2024; 89 FR 55089, July 3, 2024]

§ 26.69 Ownership.

- (a) **General rule.** A SEDO must own at least 51 percent of each class of ownership of the firm. Each SEDO whose ownership is necessary to the firm's eligibility must demonstrate that her ownership satisfies the requirements of this section. If not, the firm is ineligible.

- (b) **Overall Requirements.** A SEDO's acquisition and maintenance of an ownership interest meets the requirements of this section only if the SEDO demonstrates the following:
- (1) **Acquisition.** The SEDO acquires ownership at fair value and by one or more "investments," as defined in paragraph (c) of this section.
 - (2) **Proportion.** No owner derives benefits or bears burdens that are clearly disproportionate to their ownership shares.
 - (3) **Maintenance.** This section's requirements continue to apply after the SEDO's acquisition and the firm's certification. That is, the SEDO must maintain her investment and its proportion relative to those of other owners.
 - (i) The SEDO may not withdraw or revoke her investment.
 - (ii) When an existing co-owner contributes significant, additional, post-acquisition cash or property to the firm, the SEDO must increase her own investment to a level not clearly disproportionate to the non-SEDOS investment.
 - (A) **Example 1 to paragraph (b)(3)(ii).** SEDO and non-SEDOS own DBE 60/40. Their respective investments are approximately \$600,000 and \$400,000. The DBE has operated its business under this ownership and with this capitalization for 2 years. In Year 3, the non-SEDOS contributes a \$2 million asset to the business. The SEDO, as a result, owns 60 percent of a \$2 million asset without any additional outlay. Her ownership interest, assuming no other pertinent facts, is worth \$1.2 million more than it was before. Unless the SEDO increases her investment significantly, it is clearly disproportionate to the non-SEDOS investment and to her nominal 60 percent ownership. She has not maintained her investment.
 - (B) **Example 2 to paragraph (b)(3)(ii).** Same facts except that the DBE purchases the asset with a combination of 30 percent operating income and 70 percent proceeds of a bank loan. The SEDO maintains her investment because it remains in proportion to the non-SEDOS investment and to the value of her 60 percent ownership interest.
 - (C) **Example 3 to paragraph (b)(3)(ii).** Same facts except that the non-SEDOS, not a bank, is the DBE's creditor. The SEDO has not maintained her investment because the benefits and burdens of her ownership are clearly disproportionate to those of the non-SEDOS. The transaction may also raise § 26.71 concerns.
 - (iii) An organic increase in the value of the business does not affect maintenance because the value of the owners' investments remains proportional. In Example 2 above, the SEDO and the non-SEDOS own the new asset at 60 percent and 40 percent of its net value of \$60,000.
- (c) **Investments.** A SEDO may acquire ownership by purchase, capital contribution, or gift. Subject to the other requirements of this section, each is considered an "investment" in the firm, as are additional purchases, contributions, and qualifying gifts.
- (1) Investments are unconditional and at full risk of loss.
 - (2) Investments include a significant outlay of the SEDO's own money.
 - (3) For purposes of this part, title determines ownership of assets used for investments and of ownership interests themselves. This rule applies regardless of contrary community property, equitable distribution, banking, contract, or similar laws, rules, or principles.

- (i) The person who has title to the asset owns it in proportion to her share of title.
- (ii) However, the title rule is deemed not to apply when it produces a certification result that is manifestly unjust.

- (4) If the SEDO jointly (50/50) owns an investment of cash or property, the SEDO may claim at least a 51 percent ownership interest only if the other joint owner formally transfers to the SEDO enough of his ownership in the invested asset(s) to bring the SEDO's investment to at least 51 percent of all investments in the firm. Such transfers may be gifts described in paragraph (e) of this section.

(d) **Purchases and capital contributions.**

- (1) A purchase of an ownership interest is an investment when the consideration is entirely monetary and not a trade of property or services.
- (2) Capital that the SEDO contributes directly to the company is an investment when the contribution is all cash or a combination of cash and tangible property and/or realty.
- (3) Contributions of time, labor, services, and the like are not investments or components of investments.
- (4) Loans are not investments. The proceeds of loans may be investments to the extent that they finance the SEDO's qualifying purchase or capital contribution.
- (5) Debt-financed purchases or capital contributions are investments when they comply with the rules in this section and in § 26.70.
- (6) Guarantees are not investments.
- (7) The firm's purchases or sales of property, including ownership in itself or other companies, are not the SEDO's investments.
- (8) Other persons' or entities' purchases or capital contributions are not the SEDO's investments.

(e) **Gifts.** A gift to the SEDO is an investment when it meets the requirements of this section. The gift rules apply to partial gifts, bequests, inheritances, trust distributions, and transfers for inadequate consideration. They apply to gifts of ownership interests and to gifts of cash or property that the SEDO invests. The following requirements apply to gifts on which the SEDO relies for her investment.

- (1) The transferor/donor is or immediately becomes uninvolved with the firm in any capacity and in any other business that contracts with the firm other than as a lessor or provider of standard support services;
- (2) The transferor does not derive undue benefit; and
- (3) A writing documents the gift. When the SEDO cannot reasonably produce better evidence, a receipt, cancelled check, or transfer confirmation suffices, if the writing identifies transferor, transferee, amount or value, and date.

(f) **Curative measures.** The rules of this section do not prohibit transactions that further the objectives of, and compliance with, the provisions of this part. A SEDO or firm may enter into legitimate transactions, alter the terms of ownership, make additional investments, or bolster underlying documentation in a good faith effort to remove, surmount, or correct defects in eligibility, as long as the actions are consistent with this part.

- (1) The certifier may notify the firm of eligibility concerns and give the firm time, if the firm wishes, to attempt to remedy impediments to certification.
- (2) The firm may, of its own volition, take curative action up to the time of the certifier's decision. However, it must present evidence of curation before the certifier's decision.
- (3) The certifier may provide general assistance and guidance but not professional (legal, accounting, valuation, etc.) advice or opinions.
- (4) While the certifier may not affirmatively impede attempts to cure, it may maintain its decision timeline and make its decision based on available evidence.
- (5) The certifier must deny or remove certification when the firm's efforts or submissions violate the rules in paragraph (g) of this section.

(g) **Anti-abuse rules.**

- (1) The substance and not the form of transactions drives the eligibility determination.
- (2) The certifier must deny applications based on sham transactions or false representations, and it must decertify DBEs that engage in or make them. Transactions or representations designed to evade or materially mislead subject the firm to the same consequences.
- (3) Fraud renders the firm ineligible and subjects it to sanctions, suspension, debarment, criminal prosecution, civil litigation, and any other consequence or recourse not proscribed in this part.

Example 1 to paragraph (g)(3): SEDO claims an investment consisting of a contribution of equipment and a significant amount of her own cash. She shows that she transferred title to the equipment and wrote a check from an account she alone owns. She does not disclose that her brother-in-law lent her the money and she must repay him. The firm is ineligible under paragraphs (g)(1) and (2) of this section.

[89 FR 24972, Apr. 9, 2024]

§ 26.70 Debt-financed investments.

- (a) Subject to the other provisions of this subpart, a SEDO may borrow money to *finance* a § 26.69(c) investment entirely or partially if the SEDO has paid, on a net basis, at least 15 percent of the total value of the investment by the time the firm applies for certification.

Example 1 to paragraph (a) introductory text: A SEDO who borrows \$9,000 of her \$10,000 cash investment in Applicant, Inc., must have repaid, from her own funds, at least \$500 of the loan's principal by the time Applicant, Inc. applies for certification.

Example 2 to paragraph (a) introductory text: A SEDO who finances \$8,000 of a \$10,000 investment in Applicant may apply for Applicant's certification at any time.

Example 3 to paragraph (a) introductory text: A SEDO who contributes to the Applicant equipment worth \$40,000, which she purchased with \$10,000 of her own money and \$30,000 of seller financing may apply for Applicant's certification at any time.

- (1) The SEDO pays the net 15 percent portion of the investment to Seller or Applicant (as the case may be) from her own, not borrowed, money.
- (2) Money that the SEDO receives as a § 26.69(e) gift is her own money.

- (3) The firm, whether Applicant or DBE, does not finance any part of the investment, directly or indirectly.
- (b) The loan is real, enforceable, not in default, not offset by another agreement, and on standard commercial, arm's length terms. The following conditions also apply.
 - (1) The SEDO is the sole debtor.
 - (2) The firm is not party to the loan in any capacity, including as a guarantor.
 - (3) The SEDO does not rely on the company's credit or other resources to repay any part of the debt or otherwise to finance any part of her investment.
 - (4) The loan agreement requires level, regularly recurring payments of principal and interest, according to a standard amortization schedule, at least until the SEDO satisfies requirements in paragraph (a) of this section.
 - (5) The loan agreement permits prepayments, including by refinancing.
- (c) If the creditor forgives or cancels all or part of the debt, or the SEDO defaults, the entire debt-financed portion of the SEDO's purchase or capital contribution is no longer an investment.

Example 4 to paragraph (c): SEDO finances \$40,000 of a \$50,000 investment, and the firm becomes certified. When the SEDO has repaid half of the loan's principal and associated interest, the creditor forgives the remaining \$20,000 debt. The SEDO's investment is now \$10,000.
- (d) Paragraph (c) of the section does not prohibit refinancing with debt that meets the requirements of this section or preclude prompt curation under § 26.69(f).

[89 FR 24973, Apr. 9, 2024]

§ 26.71 Control.

- (a) **General rules.**
 - (1) One or more SEDOs of the firm must control it.
 - (2) Control determinations must consider all pertinent facts, viewed together and in context.
 - (3) A firm must have operations in the business for which it seeks certification at the time it applies. Certifiers do not certify plans or intentions, or issue contingent or conditional certifications.
- (b) **SEDO as final decision maker.** A SEDO must be the ultimate decision maker in fact, regardless of operational, policy, or delegation arrangements.
- (c) **Governance.** Governance provisions may not require that any SEDO obtain concurrence or consent from a non-SEDO to transact business on behalf of the firm.
 - (1) **Highest officer position.** A SEDO must hold the highest officer position in the company (e.g., chief executive officer or president).
 - (2) **Board of directors.** Except as detailed in paragraph (c)(4) of this section, a SEDO must have present control of the firm's board of directors, or other governing body, through the number of eligible votes.
 - (i) **Quorum requirements.** Provisions for the establishment of a quorum must not block the SEDO from calling a meeting to vote and transact business on behalf of the firm.

- (ii) **Shareholder actions.** A SEDO's authority to change the firm's composition via shareholder action does not prove control within the meaning of paragraph (c) of this section.
- (3) **Partnerships.** In a partnership, at least one SEDO must serve as a general partner, with control over all partnership decisions.
- (4) **Exception.** Bylaws or other governing provisions that require non-SED consent for extraordinary actions generally do not contravene the rules in paragraph (c) of this section. Non-exclusive examples are a sale of the company or substantially all of its assets, mergers, and a sudden, wholesale change of type of business.
- (d) **Expertise.** At least one SEDO must have an overall understanding of the business and its essential operations sufficient to make sound managerial decisions not primarily of an administrative nature. The requirements of this paragraph (d) vary with type of business, degree of technological complexity, and scale.
- (e) **SEDO decisions.** The firm must show that the SEDO critically analyzes information provided by non-SEDs and uses that analysis to make independent decisions.
- (f) **Delegation.** A SEDO may delegate administrative activities or operational oversight to a non-SED individual as long as at least one SEDO retains unilateral power to fire the delegate(s), and the chain of command is evident to all participants in the company and to all persons and entities with whom the firm conducts business.
 - (1) No non-SED participant may have power equal to or greater than that of a SEDO, considering all the circumstances. Aggregate magnitude and significance govern; a numerical tally does not.
 - (2) Non-SED participants may not make non-routine purchases or disbursements, enter into substantial contracts, or make decisions that affect company viability without the SEDO's consent.
 - (3) Written provisions or policies that specify the terms under which non-SED participants may sign or act on the SEDO's behalf with respect to recurring matters generally do not violate this paragraph (f), as long as they are consistent with the SEDO having ultimate responsibility for the action.
- (g) **Independent business.**
 - (1) If the firm receives from or shares personnel, facilities, equipment, financial support, or other essential resources, with another business (whether a DBE or non-DBE firm) or individual on other than commercially reasonable terms, the firm must prove that it would be viable as a going concern without the arrangement.
 - (2) The firm must not regularly use another firm's business-critical vehicles, equipment, machinery, or facilities to provide a product or service under contract to the same firm or one in a substantially similar business.
 - (i) **Exception 1.** Paragraphs (g)(1) and (2) of this section do not preclude the firm from providing services to a single customer or to a small number of them, provided that the firm is not merely a conduit, captive, or unnecessary third party acting on behalf of another firm or individual. Similarly, providing a volume discount to such a customer does not impair viability unless the firm repeatedly provides the service at a significant and unsustainable loss.
 - (ii) **Exception 2.** A firm may share essential resources and deal exclusively with another firm that a SEDO controls and of which the SEDO owns at least 51 percent ownership.

- (h) **Franchise and license agreements.** A business operating under a franchise or license agreement may be certified if it meets the standards in this subpart and the franchiser or licensor is not affiliated with the franchisee or licensee. In determining whether affiliation exists, the certifier should generally not consider the restraints relating to standardized quality, advertising, accounting format, and other provisions imposed on the franchisee or licensee by the franchise agreement or license, if the franchisee or licensee has the right to profit from its efforts and bears the risk of loss commensurate with ownership. Alternatively, even though a franchisee or licensee may not be controlled by virtue of such provisions in the franchise agreement or license, affiliation could arise through other means, such as common management or excessive restrictions on the sale or transfer of the franchise interest or license.

[89 FR 24973, Apr. 9, 2024]

§ 26.73 NAICS codes.

- (a) A certifier must grant certification to a firm only for specific types of work that the SEDO controls. To become certified in an additional type of work, the firm must demonstrate to the certifier only that its SEDO controls the firm with respect to that type of work. The certifier must not require that the firm be recertified or submit a new application for certification but must verify the SEDO's control of the firm in the additional type of work.
- (1) A correct NAICS code is the one that describes, as specifically as possible, the principal goods or services which the firm would provide to DOT recipients. Multiple NAICS codes may be assigned where appropriate. Program participants must rely on, and not depart from, the plain meaning of NAICS code descriptions in determining the scope of a firm's certification.
 - (2) If there is not a NAICS code that fully, clearly, or sufficiently narrowly describes the type(s) of work for which the firm seeks certification, the certifier must supplement or limit the assigned NAICS code(s) with a clear, specific, and concise narrative description of the type of work in which the firm is certified. A vague, general, or confusing description is insufficient.
 - (3) Firms and certifiers must check carefully to make sure that the NAICS codes cited in a certification are kept up-to-date and accurately reflect work which the UCP has determined the firm's owners can control. The firm bears the burden of providing detailed company information the certifying agency needs to make an appropriate NAICS code designation.
 - (4) A certifier may change a certification classification or description if there is a factual basis in the record, in which case it must notify the firm 30 days before making the change. Certifiers may not apply such changes retroactively.
 - (5) In addition to applying the appropriate NAICS code, the certifier may apply a descriptor from a classification scheme of equivalent detail and specificity. Such a descriptor (e.g., a "work code") does not supersede or limit the types of work for which a DBE is eligible under an appropriate NAICS code.

- (b) [Reserved]

[89 FR 24974, Apr. 9, 2024]

Subpart E—Certification Procedures

§ 26.81 Unified Certification Programs.

- (a) You and all other DOT recipients in your state must participate in a Unified Certification Program (UCP).
 - (1) All recipients in the same jurisdiction (normally a State) must sign an agreement establishing a UCP and submit the agreement to the Secretary for approval.
 - (2) The agreement must provide for the establishment of a UCP meeting all the requirements of this section. The agreement must specify that the UCP will follow all certification procedures and standards of this part, on the same basis as recipients; that the UCP shall cooperate fully with oversight, review, and monitoring activities of DOT and its operating administrations; and that the UCP shall implement DOT directives and guidance concerning certification matters. The agreement shall also commit recipients to ensuring that the UCP has sufficient resources and expertise to carry out the requirements of this part. The agreement shall include an implementation schedule ensuring that the UCP is fully operational no later than 18 months following the approval of the agreement by the Secretary.
 - (3) Subject to approval by the Secretary, the UCP in each state may take any form acceptable to the recipients in that state.
 - (4) The Secretary shall review the UCP and approve it, disapprove it, or remand it to the recipients in the state for revisions. A complete agreement which is not disapproved or remanded within 180 days of its receipt is deemed to be accepted.
- (b) The UCP shall make all certification decisions on behalf of all DOT recipients in the state with respect to participation in the DOT DBE Program.
 - (1) Certification decisions by the UCP shall be binding on all DOT recipients within the state.
 - (2) The UCP shall provide "one-stop shopping" to applicants for certification, such that an applicant is required to apply only once for a DBE certification that will be honored by all recipients in the state.
 - (3) All obligations of recipients with respect to certification and nondiscrimination must be carried out by UCPs, and recipients may use only UCPs that comply with the certification and nondiscrimination requirements of this part.
- (c) All certifications by UCPs shall be pre-certifications; i.e., certifications that have been made final before the due date for bids or offers on a contract on which a firm seeks to participate as a DBE.
- (d) A UCP is not required to process an application for certification from a firm having its principal place of business outside the state if the firm is not certified by the UCP in the state in which it maintains its principal place of business. The Jurisdiction of Original Certification UCP shall share its information and documents concerning the firm with other UCPs that are considering the firm's application.
- (e) Subject to DOT approval as provided in this section, recipients in two or more states may form a regional UCP. UCPs may also enter into written reciprocity agreements with other UCPs. Such an agreement shall outline the specific responsibilities of each participant. A UCP may accept the certification of any other UCP or DOT recipient.
- (f) Pending the establishment of UCPs meeting the requirements of this section, you may enter into agreements with other recipients, on a regional or inter-jurisdictional basis, to perform certification functions required by this part. You may also grant reciprocity to other recipient's certification decisions.

- (g) Each UCP must maintain a unified DBE directory containing, for all firms certified by the UCP (including those from other States certified under the provisions of this part), the information required by § 26.31. The UCP must make the directory available to the public electronically, on the internet. The UCP must update the electronic version of the directory by including additions, deletions, and other changes as soon as they are made.
- (h) Except as otherwise specified in this section, all provisions of this subpart and subpart D of this part pertaining to recipients also apply to UCPs.

[64 FR 5126, Feb. 2, 1999, as amended at 76 FR 5100, Jan. 28, 2011; 89 FR 24974, Apr. 9, 2024; 89 FR 55089, July 3, 2024]

§ 26.83 What procedures do certifiers follow in making certification decisions?

- (a) You must ensure that only firms certified as eligible DBEs under this section participate as DBEs in your program.
- (b) You must determine the eligibility of firms as DBEs consistent with the standards of subpart D of this part. When a UCP is formed, the UCP must meet all the requirements of subpart D of this part and this subpart that recipients are required to meet.
- (c)
 - (1) You must take all the following steps in determining whether a DBE firm meets the standards of subpart D of this part:
 - (i) A certifier must visit the firm's principal place of business, virtually or in person, and interview the SEDO, officers, and key personnel. The certifier must review those persons' résumés and/or work histories. The certifier must maintain a complete audio recording of the interview. The certifier must also visit one or more active job sites (if there is one). These activities comprise the "on-site review" (OSR), a written report of which the certifier must keep in its files.
 - (ii) Analyze documentation related to the legal structure, ownership, and control of the applicant firm. This includes, but is not limited to, Articles of Incorporation/Organization; corporate by-laws or operating agreements; organizational, annual and board/member meeting records; stock ledgers and certificates; and State-issued Certificates of Good Standing
 - (iii) Analyze the bonding and financial capacity of the firm; lease and loan agreements; bank account signature cards;
 - (iv) Determine the work history of the firm, including contracts it has received, work it has completed; and payroll records;
 - (v) Obtain a statement from the firm of the type of work it prefers to perform as part of the DBE program and its preferred locations for performing the work, if any.
 - (vi) Obtain or compile a list of the equipment owned by or available to the firm and the licenses the firm and its key personnel possess to perform the work it seeks to do as part of the DBE program;
 - (vii) Obtain complete Federal income tax returns (or requests for extensions) filed by the firm, its affiliates, and the socially and economically disadvantaged owners for the last 3 years. A complete return includes all forms, schedules, and statements filed with the Internal Revenue Service.

- (viii) Require potential DBEs to complete and submit an appropriate application form, except as otherwise provided in § 26.85 of this part.
- (2) You must use the application form available at <https://transportation.gov/DBEFORMS> without change or revision. However, you may provide in your DBE program, with the written approval of the concerned operating administration, for supplementing the form by requesting specified additional information not inconsistent with this part.
- (3) The certifier must ensure that the SEDO signs the Declaration of Eligibility (DOE) at the end of the Uniform Certification Application (UCA), subscribed to as true under penalty of perjury that all information provided is current, accurate, and complete.
- (4) You must review all information on the form prior to making a decision about the eligibility of the firm. You may request clarification of information contained in the application at any time in the application process.
- (d) When another certifier, in connection with its consideration of the eligibility of a firm, makes a written request for certification information you have obtained about that firm (e.g., including application materials or the report of a site visit, if you have made one to the firm), you must promptly make the information available to the other certifier.
- (e) [Reserved]
- (f) Subject to the approval of the concerned operating administration as part of your DBE program, you may impose a reasonable application fee for certification. Fee waivers shall be made in appropriate cases.
- (g) You must safeguard from disclosure to unauthorized persons information gathered as part of the certification process that may reasonably be regarded as proprietary or other confidential business information, consistent with applicable Federal, state, and local law.
- (h)
 - (1) Once a certifier has certified a firm, the firm remains certified unless and/or until the certifier removes certification, in whole or in part (*i.e.*, NAICS code removal), through the procedures of § 26.87.
 - (2) The certifier may not require a DBE to reapply for certification, renew its certification, undergo a recertification, or impose any functionally equivalent requirement. The certifier may, however, conduct a certification review at any reasonable time and/or at regular intervals of at least two years. The certification review may, at the certifier's discretion, include a new OSR. The certifier may also make an unannounced visit to the DBE's offices and/or job site. The certifier may also rely on another certifier's report of its OSR of the DBE.
- (i) If you are a DBE, you must inform the certifier or UCP in writing of any change in circumstances affecting your ability to meet size, disadvantaged status, ownership, or control requirements of this part or any material change in the information provided in your application form.
 - (1) Changes in management responsibility among members of a limited liability company are covered by this requirement.
 - (2) You must attach supporting documentation describing in detail the nature of such changes.

(3) The DBE must notify the certifier of a material change in its circumstances that affects its continued eligibility within 30 days of its occurrence, explain the change fully, and include a duly executed DOE with the notice. The DBE's non-compliance is a § 26.109(c) failure to cooperate.

(j) A DBE must provide its certifier(s), every year on the anniversary of its original certification, a new DOE along with the specified documentation in § 26.65(a), including gross receipts for its most recently completed fiscal year, calculated on a cash basis regardless of the DBE's overall accounting method. The sufficiency of documentation (and its probative value) may vary by business type, size, history, resources, and overall circumstances. However, the following documents may generally be considered "safe harbors," provided that they include all reportable receipts, properly calculated, for the full reporting period: audited financial statements, a CPA's signed attestation of correctness and completeness, or all income-related portions of one or more (when there are affiliates) signed Federal income tax returns as filed. Non-compliance, whether full or partial, is a § 26.109(c) failure to cooperate.

(k) The certifier must advise each applicant within 30 days of filing whether the application is complete and suitable for evaluation and, if not, what additional information or action is required.

(l)

(1) The certifier must render a final eligibility decision within 90 days of receiving all information required from the applicant under this part. The certifier may extend this time period once, for no more than an additional 30 days, upon written notice to the firm, explaining fully and specifically the reasons for the extension. On a case-by-case basis, the concerned OA may give the certifier one deadline extension if it approves a written request explaining why the certifier needs more time. The certifier's failure to issue a compliant decision by the applicable deadline is a constructive denial of the application, appealable to DOT under § 26.89. In this case, the certifier may be subject to enforcement actions described in §§ 26.103 and 26.105.

(2) [Reserved]

(m)

(1) A certifier may notify the applicant about ineligibility concerns and allow the firm to rectify deficiencies within the period in paragraph (l) of this section.

(2) If a firm takes curative measures before the certifier renders a decision, the certifier must consider any evidence it submits of having taken such measures. The certifier must not automatically construe curative measures as successful or abusive.

(i) **Example 1 to paragraph (m)(2).** The firm may obtain proof of an investment, transaction, or other fact on which its eligibility depends.

(ii) **Example 2 to paragraph (m)(2).** An owner or related party may create a legally enforceable document of irrevocable transfer to the SEDO.

(iii) **Example 3 to paragraph (m)(2).** The firm may amend an operating agreement, bylaw provision, or other governance document, provided that the amendment accurately reflects the parties' relationships, powers, responsibilities, and other pertinent circumstances.

- (n) Except as otherwise provided in this paragraph (n), if an applicant for DBE certification withdraws its application before the certifier issues a decision, the applicant can resubmit the application at any time. However, the certifier may place the reapplication at the "end of the line," behind other applications that have been made since the firm's previous application was withdrawn. The certifier may apply the § 26.86(c) waiting period to a firm that has established a pattern of withdrawing applications before its decision.

[64 FR 5126, Feb. 2, 1999, as amended at 68 FR 35555, June 16, 2003; 76 FR 5100, Jan. 28, 2011; 79 FR 59598, Oct. 2, 2014; 89 FR 24974, Apr. 9, 2024; 89 FR 55090, July 3, 2024]

§ 26.85 Interstate certification.

- (a) **Applicability.** This section applies to a DBE certified in any UCP.
- (b) **General rule.** When a DBE applies to another UCP for certification, the new UCP must accept the DBE's certification from its jurisdiction of original certification (JOC). The JOC is the State in which the firm maintains its principal place of business at the time of application unless and until the firm loses certification in that jurisdiction.
- (c) **Application procedure.** To obtain certification by an additional UCP, the DBE must provide:
 - (1) A cover letter that specifies that the DBE is applying for interstate certification, identifies all UCPs in which the DBE is certified (including the UCP that originally certified it)
 - (2) An electronic image of the UCP directory of the original UCP that shows the DBE certification; and
 - (3) A new DOE.
- (d) **Confirmation of eligibility.** Within 10 business days of receiving the documents required under paragraph (c) of this section, the additional UCP must confirm the certification of the DBE preferably by reference to the UCP directory of the JOC.
- (e) **Certification.** If the DBE fulfills the requirements of paragraph (c) of this section and the UCP confirms the DBE's certification per paragraph (d) of this section, the UCP must certify the DBE immediately without undergoing further procedures and provide the DBE with a letter documenting its certification.
- (f) **Noncompliance.** Failure of the additional UCP to comply with paragraphs (d) and (e) of this section is considered non-compliance with this part.
- (g) **Post-interstate certification proceedings.**
 - (1) After the additional UCP certifies the DBE, the UCP may request a fully unredacted copy of all, or a portion of, the DBE's certification file from any other UCP in which the DBE is certified.
 - (2) A UCP must provide a complete unredacted copy of the DBE's certification materials to the additional UCP within 30 days of receiving the request. Confidentiality requirements of §§ 26.83(d) and 26.109(b) do not apply.
 - (3) Once the new UCP certifies, then it must treat the DBE as it treats other DBEs, for all purposes.
 - (4) The DBE must provide an annual DOE with documentation of gross receipts, under § 26.83(j), to certifying UCPs on the anniversary date of the DBE's original certification by its JOC.
- (h) **Decertifications.**

- (1) If any UCP has reasonable cause to remove a DBE's certification, in whole or in part (*i.e.*, NAICS code removal), it must notify the other UCPs in which the DBE is certified ("other jurisdictions") via email. The notice must explain the UCP's reasons for believing the DBE's certification should be removed.
- (2) Within 30 days of receiving the notice, the other jurisdictions must email the UCP contemplating decertification a concurrence or non-concurrence with the proposed action. The other jurisdictions' responses may provide written arguments and evidence and may propose additional reasons to remove certification. A jurisdiction's failure to timely respond to the reasonable cause notice will be deemed to be a concurrence.
- (3) After a UCP receives all timely responses, it must make an independent decision whether to issue a NOI and what grounds to include.
- (4) Other UCPs may, before the hearing, submit written arguments and evidence concerning whether the firms should remain certified, but may not participate in the hearing.
- (5) If the UCP finds the firm ineligible the firm immediately loses certification in all jurisdictions in which it is certified. The NOD must include appeal instructions provided on the Departmental Office of Civil Rights' web page, available at <https://www.transportation.gov/dbeappeal>. The UCP must email a copy of its decision to the other jurisdictions within 3 business days.
- (6) The rules of paragraph (h) do not apply to attempts to decertify based upon a DBE's actions or inactions pertaining to §§ 26.83(j) (Declaration of Eligibility) and 26.109(c) (failure to cooperate).
- (7) Decertifications under this paragraph (h) must provide due process to DBEs.
 - (i) If a UCP decides not to issue a NOD removing the DBE's certification, no jurisdiction may initiate decertification proceedings, within one year, on the same or similar grounds and underlying facts.
 - (ii) If a DBE believes a UCP unfairly targets it with repeated decertification attempts, the DBE may file a complaint to the appropriate OA.
- (8) The Department's appeal decisions are binding on all UCPs unless stated otherwise.

[89 FR 24975, Apr. 9, 2024; 89 FR 55090, July 3, 2024]

§ 26.86 Decision letters.

- (a) When a certifier denies a firm's request for certification or decertifies the firm, the certifier must provide the firm a NOD explaining the reasons for the adverse decision, specifically referencing the evidence in the record that supports each reason. A certifier must also include, verbatim, the instructions found on the Departmental Office of Civil Rights' web page, available at <https://www.transportation.gov/dbeappeal>.
- (b) The certifier must promptly provide the applicant copies of all documents and other information on which it based the denial if the applicant requests them.
- (c) The certifier must establish a waiting period for reapplication of no more than 12 months. That period begins to run the day after the date of the decision letter is emailed. After the waiting period expires, the denied firm may reapply to any member of the UCP that denied the application. The certifier must inform the applicant of that right, and specify the date the waiting period ends, in its decision letter.
- (d) An appeal does not extend the waiting period.

[89 FR 24976, Apr. 9, 2024]

§ 26.87 Decertification.

- (a) **Burden of proof.** To decertify a DBE, the certifier bears the burden of proving, by a preponderance of the evidence, that the DBE does not meet the certification standards of this part.
- (b) **Initiation of decertification proceedings.**
 - (1) A certifier may determine on its own that it has reasonable cause to decertify a DBE.
 - (2) If an OA determines that there is reasonable cause to believe that a DBE does not meet the eligibility criteria of this part, the OA may direct the certifier to initiate a proceeding to remove the DBE's certification.
 - (i) The OA must provide the certifier and the DBE written notice describing the reasons for the directive, including any relevant documentation or other information.
 - (ii) The certifier must immediately commence a proceeding to decertify as provided by paragraph (e) of this section.
 - (3) Any person may file a complaint explaining, with specificity, why the certifier should decertify a DBE. The certifier need not act on a general allegation or an anonymous complaint. The certifier must keep complainants' identities confidential as provided in § 26.109(b).
 - (i) The certifier must review its records concerning the DBE, any material the DBE and/or complainant provides, and any other available information. The certifier may request additional information from the DBE or conduct any other investigation that it deems necessary.
 - (ii) If the certifier determines that there is reasonable cause to decertify the DBE, it initiates a decertification proceeding. If it determines that there is not such reasonable cause, it notifies the complainant and the DBE in writing of its decisions and the reasons for it.
- (c) **Notice of intent (NOI).** A certifier's first step in any decertification proceeding must be to email a notice of intent (NOI) to the DBE.
 - (1) The NOI must clearly and succinctly state each reason for the proposed action, and specifically identify the supporting evidence for each reason.
 - (2) The NOI must notify the DBE of its right to respond in writing, at an informal hearing, or both.
 - (3) The NOI must inform the DBE of the hearing scheduled on a date no fewer than 30 days and no more than 45 days from the date of the NOI.
 - (4) If the ground for decertification is that the DBE has been suspended or debarred for conduct related to the DBE program, the certifier issues a NOD decertifying the DBE. In this case, there is no NOI or opportunity for a hearing or written response.
- (d) **Response to NOI.**
 - (1) If the DBE wants a hearing, it must email the certifier saying so within 10 days of the NOI. If the DBE does not do so, it loses its opportunity for a hearing.
 - (2) The certifier and DBE may negotiate a different hearing date from that stated in the NOI. Parties must not engage in dilatory tactics.

- (3) If the DBE does not want a hearing, or does not give timely notice to the certifier that it wants one, the DBE may still provide written information and arguments to the certifier rebutting the reasons for decertification stated in the NOI.

(e) **Hearings.**

- (1) The purpose of the hearing is for the certifier to present its case and for the DBE to rebut the certifier's allegations.
- (2) The hearing is an informal proceeding with rules set by the hearing officer. The SEDO's attorney, a non-SEDO, or other individuals involved with the DBE may attend the hearing and answer questions related to their own experience or more generally about the DBE's ownership, structure and operations.
- (3) The certifier must maintain a complete record of the hearing, either in writing, video or audio. If the DBE appeals to DOT under § 26.89, the certifier must provide that record to DOT and to the DBE.

(f) **Separation of functions.** The certifier must ensure that the decision in a decertification case is made by an individual who did not take part in actions leading to or seeking to implement the proposal to decertify the DBE and is not subject, with respect to the matter, to direction from the office or personnel who did take part in these actions.

- (1) The certifier's method of implementing this requirement must be made part of its DBE program and approved by the appropriate OA.
- (2) The decisionmaker must be an individual who is knowledgeable about the certification requirements of this part.

(g) **Notice of decision.** The certifier must send the firm a NOD no later than 30 days of the informal hearing and/or receiving written arguments/evidence from the firm in response to the NOI.

- (1) The NOD must describe with particularity the reason(s) for the certifier's decision, including specific references to the evidence in the record that supports each reason. The NOD must also inform the firm of the consequences of the decision under paragraph (i) of this section and of its appeal rights under § 26.89.
- (2) The certifier must send copies of the NOD to the complainant in an ineligibility complaint or to the OA that directed the certifier to initiate the proceeding.
- (3) When sending a copy of an NOD to a complainant other than an OA, the certifier must not include information reasonably construed as confidential business information, unless the certifier has the written consent of the firm that submitted the information.
- (4) The certifier must make an entry in DOCR's Online Portal within 5 days of the action. The certifier must enter the name of the firm, names(s) of the firm's owner(s), date of decision, and the reason(s) for its decision.

(h) **Status of firm during proceeding.** A DBE remains certified until the certifier issues a NOD.

(i) [Reserved]

(j) **Consequences.** Decertification has the following effects on contract and overall goals and DBE participation:

- (1) When a prime contractor has made a commitment to use a DBE, but a subcontract has not been executed before the certifier issues the NOD as provided for in paragraph (g) of this section, the committed firm does not count toward the contract goal. The recipient must direct the prime contractor to meet the contract goal with an eligible DBE or demonstrate to the recipient that it has made good faith efforts to do so.
- (2) When the recipient has made a commitment to using a DBE prime contractor, but a contract has not been executed before the certifier issues the NOD, the decertified firm does not count toward the recipient's overall DBE goal.
- (3) If a prime contractor has executed a subcontract with a DBE before the certifier issues the NOD, the prime contractor may continue to receive credit toward the contract goal for the firm's work. In this case, however, the prime contractor may not extend or add work to the contract without prior written consent from the recipient.
- (4) If a prime contractor has executed a subcontract with a DBE before the certifier issues the NOD, the prime contractor may continue to receive credit toward the contract goal as set forth in paragraph (j)(3) of this section; however, the portion of the decertified firm's continued performance of the contract must not count toward the recipient's overall goal.
- (5) If the recipient executed a prime contract with a DBE that was later decertified, the portion of the decertified firm's performance of the contract remaining after the certifier issued the NOD must not count toward an overall goal, but the DBE's performance of the contract may continue to count toward satisfying any contract goal.
- (6) The following exceptions apply to this paragraph (j):
 - (i) If a certifier decertifies a firm solely because it exceeds the business size standard during the performance of the contract, the recipient may continue to count the portion of the decertified firm's performance of the contract remaining after the certifier issued the NOD toward the recipient's overall goal as well as toward the contract goal.
 - (ii) If the certifier decertifies the DBE because it was acquired by or merged with a non-DBE, the recipient may not continue to count the portion of the decertified firm's performance on the contract remaining, after the certifier issued a NOD, toward either the contract goal or the overall goal, even if a prime contractor has executed a subcontract with the firm or the recipient has executed a prime contract with the DBE that was later decertified. In this case, if eliminating the credit of the decertified firm will affect the prime contractor's ability to meet the contract goal, the recipient must direct the prime contractor to subcontract to an eligible DBE to the extent needed to meet the contract goal or demonstrate to the recipient that it has made good faith efforts to do so.

[89 FR 24976, Apr. 9, 2024; 89 FR 55090, July 3, 2024]

§ 26.88 Summary suspension of certification.

- (a) **Definition.** Summary suspension is an extraordinary remedy for lapses in compliance that cannot reasonably or adequately be resolved in a timely manner by other means.
 - (1) A firm's certification is suspended under this part as soon as the certifier transmits electronic notice to its owner at the last known email address.

- (2) During the suspension period, the DBE may not be considered to meet a contract or participation goal on contracts executed during the suspension period.

(b) **Mandatory and elective suspensions** —

- (1) **Mandatory.** The certifier must summarily suspend a DBE's certification when:

- (i) The certifier has clear and credible evidence of the DBE's or its SEDO's involvement in fraud or other serious criminal activity.
- (ii) The OA with oversight so directs.

- (2) **Elective.**

- (i) The certifier has discretion to suspend summarily if it has clear and credible evidence that the DBE's continued certification poses a substantial threat to program integrity.
- (ii) An owner upon whom the firm relies for eligibility does not timely file the declaration and gross receipts documentation that § 26.83(j) requires.

- (c) **Coordination with other remedies.** In most cases, a simple information request or a § 26.87 NOI is a sufficient response to events described in paragraphs (b)(1) and (2) of this section. The certifier should consider the burden to the DBE and to itself in determining whether summary suspension is a more prudent and proportionate, effective response. The certifier may *elect* to suspend the same DBE just once in any 12-month period.

(d) **Procedures** —

- (1) **Notice.** The certifier must notify the firm, by email, of its summary suspension notice (SSN) on a business day during regular business hours. The SSN must explain the action, the reason for it, the consequences, and the evidence on which the certifier relies.
 - (i) Elective SSNs may not cite more than one reason for the action.
 - (ii) Mandatory SSNs may state multiple reasons.
 - (iii) The SSN, regardless of type, must demand that the DBE show cause why it should remain certified and provide the time and date of a virtual show-cause hearing at which the firm may present information and arguments concerning why the certifier should lift the suspension. The SSN must also advise that the DBE may provide written information and arguments in lieu of or in addition to attending the hearing.
- (2) **Hearing.** The hearing date must be a business day that is at least 15 but not more than 25 days after the date of the notice. The DBE may respond in writing in lieu of or in addition to attending the hearing; however, it will have waived its right to a hearing if it does not confirm its attendance within 10 days of the notice and will have forfeited its certification if it does not acknowledge the notice within 15 days. The show-cause hearing must be conducted as a video conference on a standard commercial platform that the DBE may readily access at no cost.
- (3) **Response.** The DBE may provide information and arguments concerning its continuing eligibility until the 15th day following the suspension notice or the day of the hearing, if any, whichever is later. The DBE must email any written response it provides. Email submissions correctly addressed are effective when sent. The certifier may permit additional submissions after the hearing, as long as the extension ends on a business day that is not more than 30 days after the notice.

(4) **Scope and burdens.**

- (i) Suspension proceedings are limited to the suspension ground specified in the notice.
- (ii) The certifier may not amend its reason(s) for summarily suspending certification, nor may it electively suspend the firm again during the 12-month period following the notice.
- (iii) The DBE has the burden of producing information and/or making arguments concerning its continued eligibility, but it need only contest the reason cited.
- (iv) The certifier has the burden of proving its case by a preponderance of the evidence. It must issue an NOD within 30 days of the suspension notice or lift the suspension. Any NOD must rely only on the reason given in the summary suspension notice.
- (v) The DBE's failure to provide information contesting the suspension does not impair the certifier's ability to prove its case. That is, the uncontested evidence upon which the certifier relies in its notice, if substantial, will constitute a preponderance of the evidence for purposes of the NOD.

- (5) **Duration.** The DBE remains suspended during the proceedings described in this section but in no case for more than 30 days. If the certifier has not lifted the suspension or provided a rule-compliant NOD by 4:30 p.m. on the 30th day, then it must lift the suspension and amend applicable DBE lists and databases by 12 p.m. the following business day.

(e) **Recourse —**

- (1) **Appeal.** The DBE may appeal a final decision under paragraph (d)(4)(iv) of this section, as provided in § 26.89(a), but may *not* appeal the suspension itself, unless paragraph (e)(2) of this section applies.

(2) **Enforcement.**

- (i) The DBE may immediately petition the Department for an order to vacate a certifier's action if:
 - (A) The certifier sends a second elective SSN within 12 months, or
 - (B) Cites multiple reasons in an elective SSN contrary to paragraph (d)(1)(i) of this section.
- (ii) The DBE may also petition to the Department for an order to compel if the certifier fails to act within the time specified in paragraph (d)(5) of this section.

(3) In either case, the DBE must:

- (i) Email the request under the subject line, "REQUEST FOR ENFORCEMENT ORDER" in all caps;
- (ii) Limit the request to a one-page explanation that includes:
 - (A) The certifier's name and the suspension dates;
 - (B) Contact information for the certifier, the DBE, and the DBE's SEDO(s); and
 - (C) The general nature and date of the firm's response, if any, to the second suspension notice; and
 - (D) The suspension notice(s).

[89 FR 24977, Apr. 9, 2024; 89 FR 55090, July 3, 2024]

§ 26.89 Appeals to the Department.

(a)

- (1) Applicants and decertified firms may appeal adverse NODs to the Department.
- (2) An ineligibility complainant or applicable Operating Administration (the latter by the terms of § 26.87(c)) may appeal to the Department if the certifier does not find reasonable cause to issue an NOI to decertify or affirmatively determines that the DBE remains eligible.
- (3) Appellants must email appeals as directed in the certifier's decision letter within 45 days of the date of the letter. The appeal must at a minimum include a narrative that explains fully and specifically why the firm believes the decision is in error, what outcome-determinative facts the certifier did not consider, and/or what part 26 provisions the certifier misapplied.
- (4) The certifier's decision remains in effect until the Department resolves the appeal or the certifier reverses itself.

(b)

When it receives an appeal, the Department requests a copy of the certifier's complete administrative record including a video, audio, or transcript of any hearing, which the certifier must provide within 20 days of the Department's request. The Department may extend this time period when the certifier demonstrates good cause. The certifier must ensure that the administrative record is well organized, indexed, and paginated and the certifier must provide the appellant a copy of any supplemental information it provides to DOT.

(c)

(1) The Department may accept an untimely or incomplete appeal if it determines, in its sole discretion, that doing so is in the interest of justice.

(2) The Department may dismiss non-compliant or frivolous appeals without further proceedings.

(d)

The Department will avail itself of whatever remedies for noncompliance it considers appropriate.

(e)

The Department decides only the issue(s) presented on appeal. It does not conduct a *de novo* review of the matter, assess all eligibility requirements, or hold hearings. It considers the administrative record and any additional information that it considers relevant.

(f)

(1) The Department affirms the certifier's decision if it determines that the decision is consistent with applicable rules and supported by substantial evidence.

(2) The Department reverses decisions that do not meet the standard in paragraph (f)(1) of this section.

(3) The Department need not reverse if an error or omission did not result in fundamental unfairness or undue prejudice.

(4) The Department may remand the case with instructions for further action. When the Department specifies further actions, the certifier must take them without delay.

(5) The Department generally does not uphold the certifier's decision based on grounds not specified in its decision.

(6) The Department resolves appeals on the basis of facts demonstrated, and evidence presented, at the time of the certifier's decision.

- (7) The Department may summarily dismiss an appeal. Reasons for doing so include, but are not limited to, non-compliance, abuse of process, appellant or certifier request, and failure to state a claim upon which relief can be granted.
- (g) The Department does not issue advisory opinions.
- (h) All decisions described in paragraph (f) of this section are administratively final unless they say otherwise.
- (i) DOCR posts final decisions to its website, available at <https://www.transportation.gov/DBEDecisions>.

[89 FR 24978, Apr. 9, 2024]

§ 26.91 What actions do certifiers take following DOT certification appeal decisions?

- (a) If you are the certifier from whose action an appeal under § 26.89 is taken, the decision is binding. It is not binding on other certifiers.
- (b) If you are a certifier to which a DOT determination under § 26.89 is applicable, you must take the following action:
 - (1) If the Department determines that you erroneously certified a firm, you must remove the firm's eligibility on receipt of the determination, without further proceedings on your part. Effective on the date of your receipt of the Department's determination, the consequences of a removal of eligibility set forth in § 26.87(j) take effect.
 - (2) If the Department determines that you erroneously failed to find reasonable cause to remove the firm's eligibility, you must expeditiously commence a proceeding to determine whether the firm's eligibility should be removed, as provided in § 26.87.
 - (3) If the Department determines that you erroneously declined to certify or removed the eligibility of the firm, you must certify the firm, effective on the date of your receipt of the written notice of Department's determination.
 - (4) If the Department determines that you erroneously determined that the presumption of social and economic disadvantage either should or should not be deemed rebutted, you must take appropriate corrective action as determined by the Department.
 - (5) If the Department affirms your determination, no further action is necessary.
- (c) Where DOT has upheld your denial of certification to or removal of eligibility from a firm, or directed the removal of a firm's eligibility, other certifiers with whom the firm is certified may commence a proceeding to remove the firm's eligibility under § 26.87. Such certifiers must not remove the firm's eligibility absent such a proceeding. Where DOT has reversed your denial of certification to or removal of eligibility from a firm, other certifiers must take the DOT action into account in any certification action involving the firm. However, other certifiers are not required to certify the firm based on the DOT decision.

[64 FR 5126, Feb. 2, 1999, as amended at 89 FR 24979, Apr. 9, 2024]

Subpart F—Compliance and Enforcement

§ 26.101 What compliance procedures apply to recipients?

- (a) If you fail to comply with any requirement of this part, you may be subject to formal enforcement action under § 26.103 or § 26.105 or appropriate program sanctions by the concerned operating administration, such as the suspension or termination of Federal funds, or refusal to approve projects, grants or contracts until deficiencies are remedied. Program sanctions may include, in the case of the FHWA program, actions provided for under 23 CFR 1.36; in the case of the FAA program, actions consistent with 49 U.S.C. 47106(d), 47111(d), and 47122; and in the case of the FTA program, any actions permitted under 49 U.S.C. chapter 53 or applicable FTA program requirements.
- (b) As provided in statute, you will not be subject to compliance actions or sanctions for failing to carry out any requirement of this part because you have been prevented from complying because a Federal court has issued a final order in which the court found that the requirement is unconstitutional.

§ 26.103 What enforcement actions apply in FHWA and FTA programs?

The provisions of this section apply to enforcement actions under FHWA and FTA programs:

- (a) **Noncompliance complaints.** Any person who believes that a recipient has failed to comply with its obligations under this part may file a written complaint with the concerned operating administration's Office of Civil Rights. If you want to file a complaint, you must do so no later than 180 days after the date of the alleged violation or the date on which you learned of a continuing course of conduct in violation of this part. In response to your written request, the Office of Civil Rights may extend the time for filing in the interest of justice, specifying in writing the reason for so doing. The Office of Civil Rights may protect the confidentiality of your identity as provided in § 26.109(b). Complaints under this part are limited to allegations of violation of the provisions of this part.
- (b) **Compliance reviews.** The concerned operating administration may review the recipient's compliance with this part at any time, including reviews of paperwork and on-site reviews, as appropriate. The Office of Civil Rights may direct the operating administration to initiate a compliance review based on complaints received.
- (c) **Reasonable cause notice.** If it appears, from the investigation of a complaint or the results of a compliance review, that you, as a recipient, are in noncompliance with this part, the appropriate DOT office promptly sends you, return receipt requested, a written notice advising you that there is reasonable cause to find you in noncompliance. The notice states the reasons for this finding and directs you to reply within 30 days concerning whether you wish to begin conciliation.
- (d) **Conciliation.**
 - (1) If you request conciliation, the appropriate DOT office shall pursue conciliation for at least 30, but not more than 120, days from the date of your request. The appropriate DOT office may extend the conciliation period for up to 30 days for good cause, consistent with applicable statutes.
 - (2) If you and the appropriate DOT office sign a conciliation agreement, then the matter is regarded as closed and you are regarded as complying. The conciliation agreement sets forth the measures you have taken or will take to ensure compliance. While a conciliation agreement is in effect, you remain eligible for FHWA or FTA financial assistance.
 - (3) The concerned operating administration shall monitor your implementation of the conciliation agreement and ensure that its terms are complied with. If you fail to carry out the terms of a conciliation agreement, you are in noncompliance.

- (4) If you do not request conciliation, or a conciliation agreement is not signed within the time provided in paragraph (d)(1) of this section, then enforcement proceedings begin.

(e) **Enforcement actions.**

- (1) Enforcement actions are taken as provided in this subpart.
- (2) Applicable findings in enforcement proceedings are binding on all DOT offices.

[64 FR 5126, Feb. 2, 1999, as amended at 89 FR 24979, Apr. 9, 2024]

§ 26.105 What enforcement actions apply in FAA programs?

- (a) Compliance with all requirements of this part by airport sponsors and other recipients of FAA financial assistance is enforced through the procedures of Title 49 of the United States Code, including 49 U.S.C. 47106(d), 47111(d), and 47122, and regulations implementing them.
- (b) The provisions of § 26.103(b) and this section apply to enforcement actions in FAA programs.
- (c) Any person who knows of a violation of this part by a recipient of FAA funds may file a complaint under 14 CFR part 16 with the Federal Aviation Administration Office of Chief Counsel.

§ 26.107 What enforcement actions apply to firms participating in the DBE program?

- (a) If you are a firm that does not meet the eligibility criteria of subpart D of this part and that attempts to participate in a DOT-assisted program as a DBE on the basis of false, fraudulent, or deceitful statements or representations or under circumstances indicating a serious lack of business integrity or honesty, the Department may initiate suspension or debarment proceedings against you under 2 CFR parts 180 and 1200.
- (b) If you are a firm that, in order to meet DBE contract goals or other DBE program requirements, uses or attempts to use, on the basis of false, fraudulent or deceitful statements or representations or under circumstances indicating a serious lack of business integrity or honesty, another firm that does not meet the eligibility criteria of subpart D of this part, the Department may initiate suspension or debarment proceedings against you under 2 CFR parts 180 and 1200.
- (c) In a suspension or debarment proceeding brought under paragraph (a) or (b) of this section, the concerned operating administration may consider the fact that a purported DBE has been certified by a recipient. Such certification does not preclude the Department from determining that the purported DBE, or another firm that has used or attempted to use it to meet DBE goals, should be suspended or debarred.
- (d) The Department may take enforcement action under 49 CFR Part 31, Program Fraud and Civil Remedies, against any participant in the DBE program whose conduct is subject to such action under 49 CFR part 31.
- (e) The Department may refer to the Department of Justice, for prosecution under 18 U.S.C. 1001 or other applicable provisions of law, any person who makes a false or fraudulent statement in connection with participation of a DBE in any DOT-assisted program or otherwise violates applicable Federal statutes.

[64 FR 5126, Feb. 2, 1999, as amended at 76 FR 5101, Jan. 28, 2011]

§ 26.109 What are the rules governing information, confidentiality, cooperation, and intimidation or retaliation?

(a) **Availability of records.**

- (1) In responding to requests for information concerning any aspect of the DBE program, the Department complies with provisions of the Federal Freedom of Information and Privacy Acts (5 U.S.C. 552 and 552a). The Department may make available to the public any information concerning the DBE program release of which is not prohibited by Federal law.
- (2) Notwithstanding any provision of Federal or state law, you must not release any information that may reasonably be construed as confidential business information to any third party without the written consent of the firm that submitted the information. This includes applications for DBE certification and supporting information. However, you must transmit this information to DOT in any certification appeal proceeding under § 26.89 of this part or to any other state to which the individual's firm has applied for certification under § 26.85 of this part.

(b) **Confidentiality of information on complainants.** Notwithstanding the provisions of paragraph (a) of this section, the identity of complainants shall be kept confidential, at their election. If such confidentiality will hinder the investigation, proceeding or hearing, or result in a denial of appropriate administrative due process to other parties, the complainant must be advised for the purpose of waiving the privilege. Complainants are advised that, in some circumstances, failure to waive the privilege may result in the closure of the investigation or dismissal of the proceeding or hearing. FAA follows the procedures of 14 CFR part 16 with respect to confidentiality of information in complaints.

(c) **Cooperation.** All participants in the Department's DBE program (including, but not limited to, recipients, DBE firms and applicants for DBE certification, complainants and appellants, and contractors using DBE firms to meet contract goals) are required to cooperate fully and promptly with DOT and recipient compliance reviews, certification reviews, investigations, and other requests for information. Failure to do so shall be a ground for appropriate action against the party involved (e.g., with respect to recipients, a finding of noncompliance; with respect to DBE firms, denial of certification or removal of eligibility and/or suspension and debarment; with respect to a complainant or appellant, dismissal of the complaint or appeal; with respect to a contractor which uses DBE firms to meet goals, findings of non-responsibility for future contracts and/or suspension and debarment).

(d) **Intimidation and retaliation.** If you are a recipient, contractor, or any other participant in the program, you must not intimidate, threaten, coerce, or discriminate against any individual or firm for the purpose of interfering with any right or privilege secured by this part or because the individual or firm has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under this part. If you violate this prohibition, you are in noncompliance with this part.

[64 FR 5126, Feb. 2, 1999, as amended at 68 FR 35556, June 16, 2003; 76 FR 5101, Jan. 28, 2011]

Appendix A to Part 26—Guidance Concerning Good Faith Efforts

- I. When, as a recipient, you establish a contract goal on a DOT-assisted contract for procuring construction, equipment, services, or any other purpose, a bidder must, in order to be responsible and/or responsive, make sufficient good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps

to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

- II. In any situation in which you have established a contract goal, Part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, you have the responsibility to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made, based on the regulations and the guidance in this Appendix.

The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call. Determinations should not be made using quantitative formulas.

- III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (*i.e.*, obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

- IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A.

- (1) Conducting market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project.
- (2) The bidder should solicit this interest as early in the acquisition process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The bidder should determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

- B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.

- C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract.

D.

- (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.
- (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E.

- (1) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.
- (2) A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you

may reasonably raise the question of whether, with additional efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts. As provided in § 26.53(b)(2)(vi), you must also require the contractor to submit 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 to review whether DBE prices were substantially higher; and contact the DBEs listed on a contractor's solicitation to inquire as to whether they were contacted by the prime. Pro forma mailings to DBEs requesting bids are not alone sufficient to satisfy good faith efforts under the rule.

- VI. A promise to use DBEs after contract award is not considered to be responsive to the contract solicitation or to constitute good faith efforts except in design-build procurement.

[79 FR 59600, Oct. 2, 2014, as amended at 89 FR 24979, Apr. 9, 2024]

Appendix B to Part 26 [Reserved]

Appendix C to Part 26—DBE Business Development Program Guidelines

The purpose of this program element is to further the development of DBEs, including but not limited to assisting them to move into non-traditional areas of work and/or compete in the marketplace outside the DBE program, via the provision of training and assistance from the recipient.

- (A) Each firm that participates in a recipient's business development program (BDP) program is subject to a program term determined by the recipient. The term should consist of two stages; a developmental stage and a transitional stage.
- (B) In order for a firm to remain eligible for program participation, it must continue to meet all eligibility criteria contained in part 26.
- (C) By no later than 6 months of program entry, the participant should develop and submit to the recipient a comprehensive business plan setting forth the participant's business targets, objectives and goals. The participant will not be eligible for program benefits until such business plan is submitted and approved by the recipient. The approved business plan will constitute the participant's short and long term goals and the strategy for developmental growth to the point of economic viability in non-traditional areas of work and/or work outside the DBE program.
- (D) The business plan should contain at least the following:
 - (1) An analysis of market potential, competitive environment and other business analyses estimating the program participant's prospects for profitable operation during the term of program participation and after graduation from the program.
 - (2) An analysis of the firm's strengths and weaknesses, with particular attention paid to the means of correcting any financial, managerial, technical, or labor conditions which could impede the participant from receiving contracts other than those in traditional areas of DBE participation.
 - (3) Specific targets, objectives, and goals for the business development of the participant during the next two years, utilizing the results of the analysis conducted pursuant to paragraphs (C) and (D)(1) of this appendix;

- (4) Estimates of contract awards from the DBE program and from other sources which are needed to meet the objectives and goals for the years covered by the business plan; and
 - (5) Such other information as the recipient may require.
- (E) Each participant should annually review its currently approved business plan with the recipient and modify the plan as may be appropriate to account for any changes in the firm's structure and redefined needs. The currently approved plan should be considered the applicable plan for all program purposes until the recipient approves in writing a modified plan. The recipient should establish an anniversary date for review of the participant's business plan and contract forecasts.
- (F) Each participant should annually forecast in writing its need for contract awards for the next program year and the succeeding program year during the review of its business plan conducted under paragraph (E) of this appendix. Such forecast should be included in the participant's business plan. The forecast should include:
 - (1) The aggregate dollar value of contracts to be sought under the DBE program, reflecting compliance with the business plan;
 - (2) The aggregate dollar value of contracts to be sought in areas other than traditional areas of DBE participation;
 - (3) The types of contract opportunities being sought, based on the firm's primary line of business; and
 - (4) Such other information as may be requested by the recipient to aid in providing effective business development assistance to the participant.
- (G) Program participation is divided into two stages;
 - (1) a developmental stage and
 - (2) a transitional stage. The developmental stage is designed to assist participants to overcome their social and economic disadvantage by providing such assistance as may be necessary and appropriate to enable them to access relevant markets and strengthen their financial and managerial skills. The transitional stage of program participation follows the developmental stage and is designed to assist participants to overcome, insofar as practical, their social and economic disadvantage and to prepare the participant for leaving the program.
- (H) The length of service in the program term should not be a pre-set time frame for either the developmental or transitional stages but should be figured on the number of years considered necessary in normal progression of achieving the firm's established goals and objectives. The setting of such time could be factored on such items as, but not limited to, the number of contracts, aggregate amount of the contract received, years in business, growth potential, etc.
- (I) Beginning in the first year of the transitional stage of program participation, each participant should annually submit for inclusion in its business plan a transition management plan outlining specific steps to promote profitable business operations in areas other than traditional areas of DBE participation after graduation from the program. The transition management plan should be submitted to the recipient at the same time other modifications are submitted pursuant to the annual review under paragraph (E) of this section. The plan should set forth the same information as required under paragraph (F) of steps the participant will take to continue its business development after the expiration of its program term.

- (J) When a participant is recognized as successfully completing the program by substantially achieving the targets, objectives and goals set forth in its program term, and has demonstrated the ability to compete in the marketplace, its further participation within the program may be determined by the recipient.
- (K) In determining whether a concern has substantially achieved the goals and objectives of its business plan, the following factors, among others, should be considered by the recipient:
 - (1) Profitability;
 - (2) Sales, including improved ratio of non-traditional contracts to traditional-type contracts;
 - (3) Net worth, financial ratios, working capital, capitalization, access to credit and capital;
 - (4) Ability to obtain bonding;
 - (5) A positive comparison of the DBE's business and financial profile with profiles of non-DBE businesses in the same area or similar business category; and
 - (6) Good management capacity and capability.
- (L) Upon determination by the recipient that the participant should be graduated from the developmental program, the recipient should notify the participant in writing of its intent to graduate the firm in a letter of notification. The letter of notification should set forth findings, based on the facts, for every material issue relating to the basis of the program graduation with specific reasons for each finding. The letter of notification should also provide the participant 45 days from the date of service of the letter to submit in writing information that would explain why the proposed basis of graduation is not warranted.
- (M) Participation of a DBE firm in the program may be discontinued by the recipient prior to expiration of the firm's program term for good cause due to the failure of the firm to engage in business practices that will promote its competitiveness within a reasonable period of time as evidenced by, among other indicators, a pattern of inadequate performance or unjustified delinquent performance. Also, the recipient can discontinue the participation of a firm that does not actively pursue and bid on contracts, and a firm that, without justification, regularly fails to respond to solicitations in the type of work it is qualified for and in the geographical areas where it has indicated availability under its approved business plan. The recipient should take such action if over a 2-year period a DBE firm exhibits such a pattern.

Appendix D to Part 26—Mentor-Protégé Program Guidelines

- (A) The purpose of this program element is to further the development of DBEs, including but not limited to assisting them to move into non-traditional areas of work and/or compete in the marketplace outside the DBE program, via the provision of training and assistance from other firms. To operate a mentor-protégé program, a recipient must obtain the approval of the concerned operating administration.
- (B)
 - (1) Any mentor-protégé relationship shall be based on a written development plan, approved by the recipient, which clearly sets forth the objectives of the parties and their respective roles, the duration of the arrangement and the services and resources to be provided by the mentor to the protégé. The formal mentor-protégé agreement may set a fee schedule to cover the direct and indirect cost for such services rendered by the mentor for specific training and assistance to the protégé through the life of the agreement. Services provided by the mentor may be reimbursable under the FTA, FHWA, and FAA programs.

(2) To be eligible for reimbursement, the mentor's services provided and associated costs must be directly attributable and properly allowable to specific individual contracts. The recipient may establish a line item for the mentor to quote the portion of the fee schedule expected to be provided during the life of the contract. The amount claimed shall be verified by the recipient and paid on an incremental basis representing the time the protégé is working on the contract. The total individual contract figures accumulated over the life of the agreement shall not exceed the amount stipulated in the original mentor/protégé agreement.

(C) DBEs involved in a mentor-protégé agreement must be independent business entities which meet the requirements for certification as defined in subpart D of this part. A protégé firm must be certified *before* it begins participation in a mentor-protégé arrangement. If the recipient chooses to recognize mentor/protégé agreements, it should establish formal general program guidelines. These guidelines must be submitted to the operating administration for approval prior to the recipient executing an individual contractor/ subcontractor mentor-protégé agreement.

This content is from the eCFR and is authoritative but unofficial.

Title 49 —Transportation

Subtitle A —Office of the Secretary of Transportation

Part 26 —Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs

Authority: 23 U.S.C. 324; 42 U.S.C. 2000d, *et seq.*; Sec. 1101(b), Pub. L. 114–94, 129 Stat. 1312, 1324; 49 U.S.C. 47113, 47123;
Sec. 150, Pub. L. 115–254, 132 Stat. 3215.

Source: 64 FR 5126, Feb. 2, 1999, unless otherwise noted.

Appendix F to Part 26—Uniform Certification Application Form



Appendix F

UNIFORM CERTIFICATION APPLICATION
DISADVANTAGED BUSINESS ENTERPRISE (DBE) /
AIRPORT CONCESSION DISADVANTAGED BUSINESS ENTERPRISE (ACDBE)
49 C.F.R. Parts 23 and 26

Roadmap for Applicants

1. Should I apply?

You may be eligible to participate in the DBE/ACDBE program if:

- The firm is a for-profit business that performs or seeks to perform transportation related work (or a concession activity) for a recipient of Federal Transit Administration, Federal Highway Administration, or Federal Aviation Administration funds.
- The firm is at least 51% owned by a socially and economically disadvantaged individual(s) who also controls it.
- The firm's disadvantaged owners are U.S. citizens or lawfully admitted permanent residents of the U.S.
- The firm meets the Small Business Administration's size standard and does not exceed \$23.98 million in gross annual receipts for DBE (\$52.47 million for ACDBEs). (Other size standards apply for ACDBE that are banks/financial institutions, car rental companies, pay telephone firms, and automobile dealers.)

2. How do I apply?

First time applicants for DBE certification must complete and submit this certification application and related material to the certifying agency in your home state and participate in an on-site interview conducted by that agency. The attached document checklist can help you locate the items you need to submit to the agency with your completed application. If you fail to submit the required documents, your application may be delayed and/or denied. Firms already certified as a DBE do not have to complete this form, but may be asked by certifying agencies outside of your home state to provide a copy of your initial application form, supporting documents, and any other information you submitted to your home state to obtain certification or to any other state related to your certification.

3. Where can I send my application? INSERT UCP PARTICIPATING MEMBER CONTACT INFORMATION

4. Who will contact me about my application and what are the eligibility standards?

The DBE and ACDBE Programs require that all U.S. Department of Transportation (DOT) recipients of federal assistance participate in a statewide Unified Certification Program (UCP). The UCP is a one-stop certification program that eliminates the need for your firm to obtain certification from multiple certifying agencies within your state. The UCP is responsible for certifying firms and maintaining a database of certified DBEs and ACDBEs for DOT grantees, pursuant to the eligibility standards found in 49 C.F.R. Parts 23 and 26.

5. Where can I find more information?

U.S. DOT—<https://www.civilrights.dot.gov/> (This site provides useful links to the rules and regulations governing the DBE/ACDBE program, questions and answers, and other pertinent information)

SBA—Small Business Size Standards matched to the North American Industry Classification System (NAICS):
<http://www.census.gov/eos/www/naics/> and <http://www.sba.gov/content/table-small-business-size-standards>.

In collecting the information requested by this form, the Department of Transportation (Department) complies with the provisions of the Federal Freedom of Information and Privacy Acts (5 U.S.C. 552 and 552a). The Privacy Act provides comprehensive protections for your personal information. This includes how information is collected, used, disclosed, stored, and discarded. Your information will not be disclosed to third parties without your consent. The information collected will be used solely to determine your firm's eligibility to participate in the Department's Disadvantaged Business Enterprise Program as defined in 49 CFR §26.5 and the Airport Concession Disadvantaged Business Enterprise Program as defined in 49 CFR §23.3. You may review DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477).

Under 49 C.F.R. §26.107, dated February 2, 1999 and January 28, 2011, if at any time, the Department or a recipient has reason to believe that any person or firm has willfully and knowingly provided incorrect information or made false statements, the Department may initiate suspension or debarment proceedings against the person or firm under 2 CFR Parts 180 and 1200, Nonprocurement Suspension and Debarment, take enforcement action under 49 C.F.R. Part 31, Program Fraud and Civil Remedies, and/or refer the matter to the Department of Justice for criminal prosecution under 18 U.S.C. 1001, which prohibits false statements in Federal programs.



**INSTRUCTIONS FOR COMPLETING THE
DISADVANTAGED BUSINESS ENTERPRISE (DBE)
AIRPORT CONCESSIONS DISADVANTAGED BUSINESS ENTERPRISE (ACDBE)
UNIFORM CERTIFICATION APPLICATION**

NOTE: All participating firms must be for-profit enterprises. If your firm is not for profit, then you do NOT qualify for the DBE/ACDBE program and should not complete this application. If you require additional space for any question in this application, please attach additional sheets or copies as needed, taking care to indicate on each attached sheet/copy the section and number of this application to which it refers.

Section 1: CERTIFICATION INFORMATION

A. Basic Contact Information

- (1) Enter the contact name and title of the person completing this application and the person who will serve as your firm's contact for this application.
- (2) Enter the legal name of your firm, as indicated in your firm's Articles of Incorporation or charter.
- (3) Enter the primary phone number of your firm.
- (4) Enter a secondary phone number, if any.
- (5) Enter your firm's fax number, if any.
- (6) Enter the contact person's email address.
- (7) Enter your firm's website addresses, if any.
- (8) Enter the street address of the firm where its offices are physically located (not a P.O. Box).
- (9) Enter the mailing address of your firm, if it is different from your firm's street address.

B. Prior/Other Certifications and Applications

- (10) Check the appropriate box indicating whether your firm is currently certified in the DBE/ACDBE programs, and provide the name of the certifying agency that certified your firm. List the dates of any site visits conducted by your home state and any other states or UCP members. Also provide the names of state/UCP members that conducted the review.
- (11) Indicate whether your firm or any of the persons listed has ever been denied certification as a DBE, 8(a), or Small Disadvantaged Business (SDB) firm, or state and local MBE/WBE firm. Indicate if the firm has ever been decertified from one of these programs. Indicate if the application was withdrawn or whether the firm was debarred, suspended, or otherwise had its bidding privileges denied or restricted by any state or local agency, or Federal entity. If your answer is yes, identify the name of the agency, and explain fully the nature of the action in the space provided. Indicate if you have ever appealed this decision to the Department and if so, attach a copy of USDOT's final agency decision(s).

Section 2: GENERAL INFORMATION

A. Business profile:

- (1) Give a concise description of the firm's primary activities, the product(s) or services the company provides, or type of construction. If your company offers more than one product/service, list primary product or service first (attach additional sheets if necessary). This description may be used in our UCP online directory if you are certified as a DBE.

- (2) If you know the appropriate NAICS Code for the line(s) of work you identified in your business profile, enter the codes in the space provided.
- (3) State the date on which your firm was established as stated in your firm's Articles of Incorporation or charter.
- (4) State the date each person became a firm owner.
- (5) Check the appropriate box describing the manner in which you and each other owner acquired ownership of your firm. If you checked "Other," explain in the space provided.
- (6) Check the appropriate box that indicates whether your firm is "for profit." If you checked "No," then you do NOT qualify for the DBE/ACDBE program and should not complete this application. All participating firms must be for-profit enterprises. If the firm is a for profit enterprise, provide the Federal Tax ID number as stated on your firm's Federal tax return.
- (7) Check the appropriate box that describes the type of legal business structure of your firm, as indicated in your firm's Articles of Incorporation or similar document. Identify all joint venture partners if applicable. If you checked "Other," briefly explain in the space provided.
- (8) Indicate in the spaces provided how many employees your firm has, specifying the number of employees who work on a full-time, part-time, and seasonal basis. Attach a list of employees, their job titles, and dates of employment, to your application.
- (9) Specify the firm's gross receipts for each of the past three years, as stated in your firm's filed Federal tax returns. You must submit complete copies of the firm's Federal tax returns for each year. If there are any affiliates or subsidiaries of the applicant firm or owners, you must provide these firms' gross receipts and submit complete copies of these firm(s) Federal tax returns. Affiliation is defined in 49 C.F.R. §26.5 and 13 C.F.R. Part 121.

B. Relationships and Dealings with Other Businesses

- (1) Check the appropriate box that indicates whether your firm is co-located at any of its business locations, or whether your firm shares a telephone number(s), a post office box, any office space, a yard, warehouse, other facilities, any equipment, financing, or any office staff and/or employees with any other business, organization or entity of any kind. If you answered "Yes," then specify the name of the other firm(s) and fully explain the nature of your relationship with these other businesses by identifying the business or person with whom you have any formal, informal, written, or



oral agreement. Provide an explanation of any items shared with other firms in the space provided.

- (2) Check the appropriate box indicating whether any other firm currently has or had an ownership interest in your firm at present or at any time in the past. If you checked yes, please explain.
- (3) Check the appropriate box that indicates whether at present or at any time in the past your firm:
 - (a) ever existed under different ownership, a different type of ownership, or a different name;
 - (b) existed as a subsidiary of any other firm;
 - (c) existed as a partnership in which one or more of the partners are/were other firms;
 - (d) owned any percentage of any other firm; and
 - (e) had any subsidiaries of its own.
- (f) served as a subcontractor with another firm constituting more than 25% of your firm's receipts.

If you answered "Yes" to any of the questions in (3)(a-f), you may be asked to explain the arrangement in detail.

Section 3: MAJORITY OWNER INFORMATION

Identify all individuals or holding companies with any ownership interest in your firm, providing the information requested below (if your firm has more than one owner, provide completed copies of this section for each owner):

A. Identify the majority owner of the firm holding 51% or more ownership interest

- (1) Enter the full name of the owner.
- (2) Enter his/her title or position within your firm.
- (3) Give his/her home phone number.
- (4) Enter his/her home (street) address.
- (5) Indicate this owner's gender.
- (6) Identify the owner's ethnic group membership. If you checked "Other," specify this owner's ethnic group/identity not otherwise listed.
- (7) Check the appropriate box to indicate whether this owner is a U.S. citizen or a lawfully admitted permanent resident. If this owner is neither a U.S. citizen nor a lawfully admitted permanent resident of the U.S., then this owner is NOT eligible for certification as a DBE owner.
- (8) Enter the number of years during which this owner has been an owner of your firm.
- (9) Indicate the percentage of the total ownership this person holds and the date acquired, including (if appropriate), the class of stock owned.
- (10) Indicate the dollar value of this owner's initial investment to acquire an ownership interest in your firm, broken down by cash, real estate, equipment, and/or other investment. Describe how you acquired your business and attach documentation substantiating this investment.

B. Additional Owner Information

- (1) Describe the familial relationship of this owner to each other owner of your firm and employees.
- (2) Indicate whether this owner performs a management or supervisory function for any other business. If you

checked "Yes," state the name of the other business and this owner's function/title held in that business.

- (3) (a) Check the appropriate box that indicates whether this owner owns or works for any other firm(s) that has any relationship with your firm. If you checked "Yes," identify the name of the other business, the nature of the business relationship, and the owner's function at the firm.
 - (b) If the owner works for any other firm, non-profit organization, or is engaged in any other activity more than 10 hours per week, please identify this activity.
- (4) (a) Provide the personal net worth of the owner applying for certification in the space provided. Complete and attach the accompanying "Personal Net Worth Statement for DBE/ACDBE Program Eligibility" with your application. Note, complete this section and accompanying statement only for each owner applying for DBE qualification (i.e., for each owner claiming to be socially and economically disadvantaged).
 - (b) Check the appropriate box that indicates whether any trust has been created for the benefit of the disadvantaged owner(s). If you answered "Yes," you may be asked to provide a copy of the trust instrument.
- (5) Check the appropriate to indicate whether any of your immediate family members, managers, or employees, own, manage, or are associated with another company. Immediate family member is defined in 49 C.F.R. §26.5. If you answered "Yes," provide the name of each person, your relationship to them, the name of the company, the type of business, and whether they own or manage the company.

Section 4: CONTROL

A. Identify the firm's Officers and Board of Directors

- (1) In the space provided, state the name, title, date of appointment, ethnicity, and gender of each officer.
- (2) In the space provided, state the name, title, date of appointment, ethnicity, and gender of each individual serving on your firm's Board of Directors.
- (3) Check the appropriate box to indicate whether any of your firm's officers and/or directors listed above performs a management or supervisory function for any other business. If you answered "Yes," identify each person by name, his/her title, the name of the other business in which s/he is involved, and his/her function performed in that other business.
- (4) Check the appropriate box that indicates whether any of your firm's officers and/or directors listed above own or work for any other firm(s) that has a relationship with your firm. (e.g., ownership interest, shared office space, financial investments, equipment leases, personnel sharing, etc.) If you answered "Yes," identify the name of the firm, the individual's name, and the nature of his/her business relationship with that other firm.



B. Duties of Owners, Officers, Directors, Managers and Key Personnel

(1), (2) Specify the roles of the majority and minority owners, directors, officers, and managers, and key personnel who control the functions listed for the business. Submit résumés for each owner and non-owner identified below. State the name of the individual, title, race and gender and percentage ownership if any. Circle the frequency of each person's involvement as follows: "always, frequently, seldom, or never" in each area.

Indicate whether any of the persons listed in this section perform a management or supervisory function for any other business. Identify the person, business, and their title/function. Identify if any of the persons listed above own or work for any other firm(s) that has a relationship with this firm (e.g. ownership interest, shared office space, financial investment, equipment, leases, personnel sharing, etc.) If you answered "Yes," describe the nature of his/her business relationship with that other firm.

C. Inventory: Indicate firm inventory in these categories:

(1) Equipment and Vehicles

State the make and model, and current dollar value of each piece of equipment and motor vehicle held and/or used by your firm. Indicate whether each piece is either owned or leased by your firm or owner, whether it is used as collateral, and where this item is stored.

(2) Office Space

State the street address of each office space held and/or used by your firm. Indicate whether your firm or owner owns or leases the office space and the current dollar value of that property or its lease.

(3) Storage Space

State the street address of each storage space held and/or used by your firm. Indicate whether your firm or owner owns or leases the storage space and the current dollar value of that property or its lease. Provide a signed lease agreement for each property.

D. Does your firm rely on any other firm for management functions or employee payroll?

Check the appropriate box that indicates whether your firm relies on any other firm for management functions or for employee payroll. If you answered "Yes," you may be asked to explain the nature of that reliance and the extent to which the other firm carries out such functions.

E. Financial / Banking Information

Banking Information. State the name, City and State of your firm's bank. In the space provided, identify the persons able to sign checks on this account. Provide bank authorization and signature cards

Bonding Information. State your firm's bonding limits (in dollars), specifying both the aggregate and project limits.

F. Sources, amounts, and purposes of money loaned to your firm, including the names of persons or firms guaranteeing the loan.

State the name and address of each source, the name of person securing the loan, original dollar amount and the current balance of each loan, and the purpose for which each loan was made to your firm. Provide copies of signed loan agreements and security agreements

G. Contributions or transfers of assets to/from your firm and to/from any of its owners or another individual over the past two years:

Indicate in the spaces provided, the type of contribution or asset that was transferred, its current dollar value, the person or firm from whom it was transferred, the person or firm to whom it was transferred, the relationship between the two persons and/or firms, and the date of the transfer.

H. Current licenses/permits held by any owner or employee of your firm.

List the name of each person in your firm who holds a professional license or permit, the type of permit or license, the expiration date of the permit or license, and issuing State of the license or permit. Attach copies of licenses, license renewal forms, permits, and haul authority forms.

I. Largest contracts completed by your firm in the past three years, if any.

List the name of each owner or contractor for each contract, the name and location of the projects under each contract, the type of work performed on each contract, and the dollar value of each contract.

J. Largest active jobs on which your firm is currently working.

For each active job listed, state the name of the prime contractor and the project number, the location, the type of work performed, the project start date, the anticipated completion date, and the dollar value of the contract.

AIRPORT CONCESSION (ACDBE) APPLICANTS

Identify the concession space, address and location at the airport, the value of the property or lease, and fees/lease payments paid to the airport. Provide information concerning any other airport concession businesses the applicant firm or any affiliate owns and/or operates, including name, location, type of concession, and start date of the concession enterprise.

AFFIDAVIT & SIGNATURE

The Affidavit of Certification must accompany your application for certification. Carefully read the attached affidavit in its entirety. Fill in the required information for each blank space, and sign and date the affidavit in the presence of a Notary Public, who must then notarize the form.



Section 1: CERTIFICATION INFORMATION

A. Basic Contact Information

(1) Contact person and Title: _____ (2) Legal name of firm: _____

(3) Phone #: () _____ - _____ (4) Other Phone #: () _____ - _____ (5) Fax #: () _____ - _____
(6) E-mail: _____ (7) Firm Websites: _____
(8) Street address of firm (No P.O. Box): _____ City: _____ County/Parish: _____ State: _____ Zip: _____
(9) Mailing address of firm (if different): _____ City: _____ County/Parish: _____ State: _____ Zip: _____

B. Prior/Other Certifications and Applications

(10) Is your firm currently certified for any of the following U.S. DOT programs?

☐ DBE ☐ ACDBE Names of certifying agencies: _____

© If you are certified in your home state as a DBE/ACDBE, you do not have to complete this application for other states. Ask your state UCP about the interstate certification process.

List the dates of any site visits conducted by your home state and any other states or UCP members:

Date ____/____/____ State/UCP Member: _____ Date ____/____/____ State/UCP Member: _____

(11) Indicate whether the firm or any persons listed in this application have ever been:

- (a) Denied certification or decertified as a DBE, ACDBE, 8(a), SDB, MBE/WBE firm? ☐ Yes ☐ No
(b) Withdrawn an application for these programs, or debarred or suspended or otherwise had bidding privileges denied or restricted by any state or local agency, or Federal entity? ☐ Yes ☐ No

If yes, explain the nature of the action. (If you appealed the decision to DOT or another agency, attach a copy of the decision,

Section 2: GENERAL INFORMATION

A. Business Profile: (1) Give a concise description of the firm's primary activities and the product(s) or service(s) it provides. If your company offers more than one product/service, list the primary product or service first. Please use additional paper if necessary. This description may be used in our database and the UCP online directory if you are certified as a DBE or ACDBE.

(2) Applicable NAICS Codes for this line of work include: _____

(3) This firm was established on ____/____/____ (4) I/We have owned this firm since: ____/____/____

(5) Method of acquisition (Check all that apply):

- ☐ Started new business ☐ Bought existing business ☐ Inherited business ☐ Secured concession
☐ Merger or consolidation ☐ Other (explain) _____



(6) Is your firm "for profit"? ☐ Yes ☐ No → **STOP!** If your firm is NOT for-profit, then you do NOT qualify for this program and should not fill out this application.
Federal Tax ID# _____

(7) Type of Legal Business Structure: (check all that apply):
☐ Sole Proprietorship ☐ Limited Liability Partnership
☐ Partnership ☐ Corporation
☐ Limited Liability Company ☐ Joint Venture (Identify all JV partners _____)
☐ Applying as an ACDBE ☐ Other, Describe _____

(8) Number of employees: Full-time _____ Part-time _____ Seasonal _____ Total _____
(Provide a list of employees, their job titles, and dates of employment, to your application).

(9) Specify the firm's gross receipts for the last 3 years. (Submit complete copies of the firm's Federal tax returns for each year. If there are affiliates or subsidiaries of the applicant firm or owners, you must submit complete copies of these firms' Federal tax returns).

Year _____	Gross Receipts of Applicant Firm \$ _____	Gross Receipts of Affiliate Firms \$ _____
Year _____	Gross Receipts of Applicant Firm \$ _____	Gross Receipts of Affiliate Firms \$ _____
Year _____	Gross Receipts of Applicant Firm \$ _____	Gross Receipts of Affiliate Firms \$ _____

B. Relationships and Dealings with Other Businesses

(1) Is your firm co-located at any of its business locations, or does it share a telephone number, P.O. Box, office or storage space, yard, warehouse, facilities, equipment, inventory, financing, office staff, and/or employees with any other business, organization, or entity? ☐ Yes ☐ No
If Yes, explain the nature of your relationship with these other businesses by identifying the business or person with whom you have any formal, informal, written, or oral agreement. Also detail the items shared.

(2) Has any other firm had an ownership interest in your firm at present or at any time in the past?
☐ Yes ☐ No If Yes, explain _____

(3) At present, or at any time in the past, has your firm:
 (a) Ever existed under different ownership, a different type of ownership, or a different name? ☐ Yes ☐ No
 (b) Existed as a subsidiary of any other firm? ☐ Yes ☐ No
 (c) Existed as a partnership in which one or more of the partners are/were other firms? ☐ Yes ☐ No
 (d) Owned any percentage of any other firm? ☐ Yes ☐ No
 (e) Had any subsidiaries? ☐ Yes ☐ No
 (f) Served as a subcontractor with another firm constituting more than 25% of your firm's receipts? ☐ Yes ☐ No

(If you answered "Yes" to any of the questions in (2) and/or (3)(a)-(f), you may be asked to provide further details and explain whether the arrangement continues).



Section 3: MAJORITY OWNER INFORMATION

A. Identify the majority owner of the firm holding 51% or more ownership interest.

(1) Full Name: _____ (2) Title: _____ (3) Home Phone #: _____
() - _____

(4) Home Address (Street and Number): _____ City: _____ State: _____ Zip: _____
_____ - _____

(5) Gender: ☐ Male ☐ Female

(6) Ethnic group membership (Check all that apply):

- ☐ Black ☐ Hispanic
☐ Asian Pacific ☐ Native American
☐ Subcontinent Asian
☐ Other (specify) _____

(7) U.S. Citizenship:

- ☐ U.S. Citizen
☐ Lawfully Admitted Permanent Resident

(8) Number of years as owner: _____

(9) Percentage owned: _____ %

Class of stock owned: _____

Date acquired: _____

(10) Initial investment to acquire ownership interest in firm:	Type	Dollar Value
	Cash	\$ _____
	Real Estate	\$ _____
	Equipment	\$ _____
	Other	\$ _____

Describe how you acquired your business:

- ☐ Started business myself
☐ It was a gift from: _____
☐ I bought it from: _____
☐ I inherited it from: _____
☐ Other: _____

(Attach documentation substantiating your investment)

B. Additional Owner Information

(1) Describe familial relationship to other owners and employees:

(2) Does this owner perform a management or supervisory function for any other business? ☐ Yes ☐ No

If Yes, identify: Name of Business: _____ Function/Title: _____

(3)(a) Does this owner own or work for any other firm(s) that has a relationship with this firm? (e.g., ownership interest, shared office space, financial investments, equipment, leases, personnel sharing, etc.) ☐ Yes ☐ No

Identify the name of the business, and the nature of the relationship, and the owner's function at the firm:

(b) Does this owner work for any other firm, non-profit organization, or is engaged in any other activity more than 10 hours per week? If yes, identify this activity: _____

(4)(a) What is the personal net worth of this disadvantaged owner applying for certification? \$ _____

(b) Has any trust been created for the benefit of this disadvantaged owner(s)? ☐ Yes ☐ No

(If Yes, you may be asked to provide a copy of the trust instrument).

(5) Do any of your immediate family members, managers, or employees own, manage, or are associated with another company? ☐ Yes ☐ No If Yes, provide their name, relationship, company, type of business, and indicate whether they own or manage the company: (Please attach extra sheets, if needed): _____



Section 3: OWNER INFORMATION, Cont'd.

A. Identify all individuals, firms, or holding companies that hold LESS THAN 51% ownership interest in the firm (Attach separate sheets for each additional owner)

(1) Full Name: _____ (2) Title: _____ (3) Home Phone #: _____
() - _____

(4) Home Address (Street and Number): _____ City: _____ State: _____ Zip: _____

(5) Gender: ☐ Male ☐ Female

(6) Ethnic group membership (Check all that apply)

- ☐ Black ☐ Hispanic
☐ Asian Pacific ☐ Native American
☐ Subcontinent Asian
☐ Other (specify) _____

(7) U.S. Citizenship:

- ☐ U.S. Citizen
☐ Lawfully Admitted Permanent Resident

(8) Number of years as owner: _____

(9) Percentage owned: _____ %

Class of stock owned: _____

Date acquired: _____

(10) Initial investment to acquire ownership interest in firm:	Type	Dollar Value
	Cash	\$ _____
	Real Estate	\$ _____
	Equipment	\$ _____
	Other	\$ _____

Describe how you acquired your business:

- ☐ Started business myself
☐ It was a gift from: _____
☐ I bought it from: _____
☐ I inherited it from: _____
☐ Other: _____

(Attach documentation substantiating your investment)

B. Additional Owner Information

(1) Describe familial relationship to other owners and employees:

(2) Does this owner perform a management or supervisory function for any other business? ☐ Yes ☐ No

If Yes, identify: Name of Business: _____ Function/Title: _____

(3)(a) Does this owner own or work for any other firm(s) that has a relationship with this firm? (e.g., ownership interest, shared office space, financial investments, equipment, leases, personnel sharing, etc.) ☐ Yes ☐ No

Identify the name of the business, and the nature of the relationship, and the owner's function at the firm:

(b) Does this owner work for any other firm, non-profit organization, or is engaged in any other activity more than 10 hours per week? If yes, identify this activity: _____

(4)(a) What is the personal net worth of this disadvantaged owner applying for certification? \$ _____

(b) Has any trust been created for the benefit of this disadvantaged owner(s)? ☐ Yes ☐ No

(If Yes, you may be asked to provide a copy of the trust instrument).

(5) Do any of your immediate family members, managers, or employees own, manage, or are associated with another company? ☐ Yes ☐ No If Yes, provide their name, relationship, company, type of business, and indicate whether they own or manage: (Please attach extra sheets, if needed): _____



Section 4: CONTROL

A. Identify your firm's Officers and Board of Directors (If additional space is required, attach a separate sheet):

	Name	Title	Date Appointed	Ethnicity	Gender
(1) Officers of the Company	(a)				
	(b)				
	(c)				
	(d)				
(2) Board of Directors	(a)				
	(b)				
	(c)				
	(d)				

(3) Do any of the persons listed above perform a management or supervisory function for any other business?

☐ Yes ☐ No If Yes, identify for each:

Person: _____ Title: _____

Business: _____ Function: _____

Person: _____ Title: _____

Business: _____ Function: _____

(4) Do any of the persons listed in section A above own or work for any other firm(s) that has a relationship with this firm? (e.g., ownership interest, shared office space, financial investments, equipment, leases, personnel sharing, etc.)

☐ Yes ☐ No If Yes, identify for each:

Firm Name: _____ Person: _____

Nature of Business Relationship: _____

B. Duties of Owners, Officers, Directors, Managers, and Key Personnel

1. (Identify your firm's management personnel who control your firm in the following areas (Attach separate sheets as needed).)

A = Always F = Frequently	S = Seldom N = Never	Majority Owner (51% or more)				Minority Owner (49% or less)			
		Name:	Title:	Percent Owned:		Name:	Title:	Percent Owned:	
Sets policy for company direction/scope of operations		A	F	S	N	A	F	S	N
Bidding and estimating		A	F	S	N	A	F	S	N
Major purchasing decisions		A	F	S	N	A	F	S	N
Marketing and sales		A	F	S	N	A	F	S	N
Supervises field operations		A	F	S	N	A	F	S	N
Attend bid opening and lettings		A	F	S	N	A	F	S	N
Perform office management (billing, accounts receivable/payable, etc.)		A	F	S	N	A	F	S	N
Hires and fires management staff		A	F	S	N	A	F	S	N
Hire and fire field staff or crew		A	F	S	N	A	F	S	N
Designates profits spending or investment		A	F	S	N	A	F	S	N
Obligates business by contract/credit		A	F	S	N	A	F	S	N
Purchase equipment		A	F	S	N	A	F	S	N
Signs business checks		A	F	S	N	A	F	S	N

2. Complete for all Officers, Directors, Managers, and Key Personnel who control the following functions for the firm. (Attach separate sheets as needed).

A= Always S = Seldom F = Frequently N = Never	Officer/Director/Manager/Key Personnel				Officer/Director/Manager/ Key Personnel			
	Name: _____ Title: _____ Race and Gender: _____ Percent Owned: _____				Name: _____ Title: _____ Race and Gender: _____ Percent Owned: _____			
Sets policy for company direction/scope of operations	A	F	S	N	A	F	S	N
Bidding and estimating	A	F	S	N	A	F	S	N
Major purchasing decisions	A	F	S	N	A	F	S	N
Marketing and sales	A	F	S	N	A	F	S	N
Supervises field operations	A	F	S	N	A	F	S	N
Attend bid opening and lettings	A	F	S	N	A	F	S	N
Perform office management (billing, accounts receivable/payable, etc.)	A	F	S	N	A	F	S	N
Hires and fires management staff	A	F	S	N	A	F	S	N
Hire and fire field staff or crew	A	F	S	N	A	F	S	N
Designates profits spending or investment	A	F	S	N	A	F	S	N
Obligates business by contract/credit	A	F	S	N	A	F	S	N
Purchase equipment	A	F	S	N	A	F	S	N
Signs business checks	A	F	S	N	A	F	S	N

Do any of the persons listed in B1 or B2 perform a management or supervisory function for any other business? If Yes, identify the person, the business, and their title/function: _____

Do any of the persons listed above own or work for any other firm(s) that has a relationship with this firm? (e.g., ownership interest, shared office space, financial investments, equipment, leases, personnel sharing, etc.) If Yes, describe the nature of the business relationship: _____

C. Inventory: Indicate your firm's inventory in the following categories (Please attach additional sheets if needed):

1. Equipment and Vehicles

Make and Model	Current Value	Owned or Leased by Firm or Owner?	Used as collateral?	Where is item stored?
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				

2. Office Space

Street Address	Owned or Leased by Firm or Owner?	Current Value of Property or Lease



3. Storage Space (Provide signed lease agreements for the properties listed)

Street Address

Owned or Leased by
Firm or Owner?

Current Value of Property or Lease

D. Does your firm rely on any other firm for management functions or employee payroll? ☐ Yes ☐ No

E. Financial/Banking Information (Provide bank authorization and signature cards)

Name of bank: _____ City and State: _____
The following individuals are able to sign checks on this account: _____

Name of bank: _____ City and State: _____
The following individuals are able to sign checks on this account: _____

Bonding Information: If you have bonding capacity, identify the firm's bonding aggregate and project limits:
Aggregate limit \$ _____ Project limit \$ _____

F. Identify all sources, amounts, and purposes of money loaned to your firm including from financial institutions. Identify whether you the owner and any other person or firm loaned money to the applicant DBE/ACDBE. Include the names of any persons or firms guaranteeing the loan, if other than the listed owner.
(Provide copies of signed loan agreements and security agreements).

Name of Source	Address of Source	Name of Person Guaranteeing the Loan	Original Amount	Current Balance	Purpose of Loan
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____

G. List all contributions or transfers of assets to/from your firm and to/from any of its owners or another individual over the past two years (Attach additional sheets if needed):

Contribution/Asset	Dollar Value	From Whom Transferred	To Whom Transferred	Relationship	Date of Transfer
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____

H. List current licenses/permits held by any owner and/or employee of your firm
(e.g. contractor, engineer, architect, etc.) (Attach additional sheets if needed):

Name of License/Permit Holder	Type of License/Permit	Expiration Date	State
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____



I. List the three largest contracts completed by your firm in the past three years, if any:

Name of Owner/Contractor	Name/Location of Project	Type of Work Performed	Dollar Value of Contract
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

J. List the three largest active jobs on which your firm is currently working:

Name of Prime Contractor and Project Number	Location of Project	Type of Work	Project Start Date	Anticipated Completion Date	Dollar Value of Contract
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____

AIRPORT CONCESSION (ACDBE) APPLICANTS ONLY MUST COMPLETE THIS SECTION

Identify the following information concerning the ACDBE applicant firm:

<u>Concession Space</u>	<u>Address / Location at Airport</u>	<u>Value of Property or Lease</u>	<u>Fees/Lease Payments Paid to the Airport</u>

Provide information concerning any other airport concession businesses the applicant firm or any affiliate owns and/or operates, including name, location, type of concession, and start date of concession

<u>Name of Concession</u>	<u>Location</u>	<u>Type of Concession</u>	<u>Start Date of Concession</u>



AFFIDAVIT OF CERTIFICATION

This form must be signed and notarized for each owner upon which disadvantaged status is relied.

A MATERIAL OR FALSE STATEMENT OR OMISSION MADE IN CONNECTION WITH THIS APPLICATION IS SUFFICIENT CAUSE FOR DENIAL OF CERTIFICATION, REVOCATION OF A PRIOR APPROVAL, INITIATION OF SUSPENSION OR DEBARMENT PROCEEDINGS, AND MAY SUBJECT THE PERSON AND/OR ENTITY MAKING THE FALSE STATEMENT TO ANY AND ALL CIVIL AND CRIMINAL PENALTIES AVAILABLE PURSUANT TO APPLICABLE FEDERAL AND STATE LAW.

I _____ (full name printed),
swear or affirm under penalty of law that I am
_____ (title) of the applicant firm
_____ and that I

have read and understood all of the questions in this application and that all of the foregoing information and statements submitted in this application and its attachments and supporting documents are true and correct to the best of my knowledge, and that all responses to the questions are full and complete, omitting no material information. The responses include all material information necessary to fully and accurately identify and explain the operations, capabilities and pertinent history of the named firm as well as the ownership, control, and affiliations thereof.

I recognize that the information submitted in this application is for the purpose of inducing certification approval by a government agency. I understand that a government agency may, by means it deems appropriate, determine the accuracy and truth of the statements in the application, and I authorize such agency to contact any entity named in the application, and the named firm's bonding companies, banking institutions, credit agencies, contractors, clients, and other certifying agencies for the purpose of verifying the information supplied and determining the named firm's eligibility.

I agree to submit to government audit, examination and review of books, records, documents and files, in whatever form they exist, of the named firm and its affiliates, inspection of its places(s) of business and equipment, and to permit interviews of its principals, agents, and employees. I understand that refusal to permit such inquiries shall be grounds for denial of certification.

If awarded a contract, subcontract, concession lease or sublease, I agree to promptly and directly provide the prime contractor, if any, and the Department, recipient agency, or federal funding agency on an ongoing basis, current, complete and accurate information regarding (1) work performed on the project; (2) payments; and (3) proposed changes, if any, to the foregoing arrangements.

I agree to provide written notice to the recipient agency or Unified Certification Program of any material change in the information contained in the original application within 30 calendar days of such change (e.g., ownership changes, address/telephone number, personal net worth exceeding \$1.32 million, etc.).

I acknowledge and agree that any misrepresentations in this application or in records pertaining to a contract or subcontract will be grounds for terminating any contract or subcontract which may be awarded; denial or revocation of certification; suspension and debarment; and for initiating action under federal and/or state law concerning false statement, fraud or other applicable offenses.

I certify that I am a socially and economically disadvantaged individual who is an owner of the above-referenced firm seeking certification as a Disadvantaged Business Enterprise or Airport Concession Disadvantaged Business Enterprise. In support of my application, I certify that I am a member of one or more of the following groups, and that I have held myself out as a member of the group(s): (Check all that apply):

☐ Female ☐ Black American ☐ Hispanic American
☐ Native American ☐ Asian-Pacific American
☐ Subcontinent Asian American ☐ Other (specify) _____

I certify that I am socially disadvantaged because I have been subjected to racial or ethnic prejudice or cultural bias, or have suffered the effects of discrimination, because of my identity as a member of one or more of the groups identified above, without regard to my individual qualities.

I further certify that my personal net worth does not exceed \$1.32 million, and that I am economically disadvantaged because my ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same or similar line of business who are not socially and economically disadvantaged.

I declare under penalty of perjury that the information provided in this application and supporting documents is true and correct.

Signature _____ (DBE/ACDBE Applicant) _____ (Date)

NOTARY CERTIFICATE



UNIFORM CERTIFICATION APPLICATION SUPPORTING DOCUMENTS CHECKLIST

In order to complete your application for DBE or ACDBE certification, you must attach copies of all of the following **REQUIRED** documents. A failure to supply any information requested by the UCP may result in your firm denied DBE/ACDBE certification.

Required Documents for All Applicants

- ☐ Résumés (that include places of employment with corresponding dates), for all owners, officers, and key personnel of the applicant firm
- ☐ Personal Net Worth Statement for each socially and economically disadvantaged owners comprising 51% or more of the ownership percentage of the applicant firm.
- ☐ Personal Federal tax returns for the past 3 years, if applicable, for each disadvantaged owner
- ☐ Federal tax returns (and requests for extensions) filed by the firm and its affiliates with related schedules, for the past 3 years.
- ☐ Documented proof of contributions used to acquire ownership for each owner (e.g., both sides of cancelled checks)
- ☐ Signed loan and security agreements, and bonding forms
- ☐ List of equipment and/or vehicles owned and leased including VIN numbers, copy of titles, proof of ownership, insurance cards for each vehicle.
- ☐ Title(s), registration certificate(s), and U.S. DOT numbers for each truck owned or operated by your firm
- ☐ Licenses, license renewal forms, permits, and haul authority forms
- ☐ Descriptions of all real estate (including office/storage space, etc.) owned/leased by your firm and documented proof of ownership/signed leases
- ☐ Documented proof of any transfers of assets to/from your firm and/or to/from any of its owners over the past 2 years
- ☐ DBE/ACDBE and SBA 8(a), SDB, MBE/WBE certifications, denials, and/or decertifications, if applicable; and any U.S. DOT appeal decisions on these actions.
- ☐ Bank authorization and signatory cards
- ☐ Schedule of salaries (or other remuneration) paid to all officers, managers, owners, and/or directors of the firm
- ☐ List of all employees, job titles, and dates of employment.
- ☐ Proof of warehouse/storage facility ownership or lease arrangements

Partnership or Joint Venture

- ☐ Original and any amended Partnership or Joint Venture Agreements

Corporation or LLC

- ☐ Official Articles of Incorporation (signed by the state official)
- ☐ Both sides of all corporate stock certificates and your firm's stock transfer ledger
- ☐ Shareholders' Agreement(s)
- ☐ Minutes of all stockholders and board of directors meetings

- ☐ Corporate by-laws and any amendments
- ☐ Corporate bank resolution and bank signature cards
- ☐ Official Certificate of Formation and Operating Agreement with any amendments (for LLCs)

Optional Documents to Be Provided on Request

The UCP to which you are applying may require the submission of the following documents. If requested to provide these document, you must supply them with your application or at the on-site visit.

- ☐ Proof of citizenship
- ☐ Insurance agreements for each truck owned or operated by your firm
- ☐ Audited financial statements (if available)
- ☐ Personal Federal Tax returns for the past 3 years, if applicable, for other disadvantaged owners of the firm.
- ☐ Trust agreements held by any owner claiming disadvantaged status
- ☐ Year-end balance sheets and income statements for the past 3 years (or life of firm, if less than three years)

Suppliers

- ☐ List of product lines carried and list of distribution equipment owned and/or leased

[79 FR 59603, Oct. 2, 2014]

Office of the Secretary of Transportation

Pt. 26, App. F

APPENDIX F TO PART 26—UNIFORM CERTIFICATION APPLICATION FORM



Appendix F

UNIFORM CERTIFICATION APPLICATION
DISADVANTAGED BUSINESS ENTERPRISE (DBE) /
AIRPORT CONCESSION DISADVANTAGED BUSINESS ENTERPRISE (ACDBE)
49 C.F.R. Parts 23 and 26

Roadmap for Applicants

1. Should I apply?

You may be eligible to participate in the DBE/ACDBE program if:

- The firm is a for-profit business that performs or seeks to perform transportation related work (or a concession activity) for a recipient of Federal Transit Administration, Federal Highway Administration, or Federal Aviation Administration funds.
- The firm is at least 51% owned by a socially and economically disadvantaged individual(s) who also controls it.
- The firm's disadvantaged owners are U.S. citizens or lawfully admitted permanent residents of the U.S.
- The firm meets the Small Business Administration's size standard and does not exceed \$23.98 million in gross annual receipts for DBE (\$52.47 million for ACDBEs). (Other size standards apply for ACDBE that are banks/financial institutions, car rental companies, pay telephone firms, and automobile dealers.)

2. How do I apply?

First time applicants for DBE certification must complete and submit this certification application and related material to the certifying agency in your home state and participate in an on-site interview conducted by that agency. The attached document checklist can help you locate the items you need to submit to the agency with your completed application. If you fail to submit the required documents, your application may be delayed and/or denied. Firms already certified as a DBE do not have to complete this form, but may be asked by certifying agencies outside of your home state to provide a copy of your initial application form, supporting documents, and any other information you submitted to your home state to obtain certification or to any other state related to your certification.

3. Where can I send my application? INSERT UCP PARTICIPATING MEMBER CONTACT INFORMATION

4. Who will contact me about my application and what are the eligibility standards?

The DBE and ACDBE Programs require that all U.S. Department of Transportation (DOT) recipients of federal assistance participate in a statewide Unified Certification Program (UCP). The UCP is a one-stop certification program that eliminates the need for your firm to obtain certification from multiple certifying agencies within your state. The UCP is responsible for certifying firms and maintaining a database of certified DBEs and ACDBEs for DOT grantees, pursuant to the eligibility standards found in 49 C.F.R. Parts 23 and 26.

5. Where can I find more information?

U.S. DOT—<https://www.civilrights.dot.gov/> (This site provides useful links to the rules and regulations governing the DBE/ACDBE program, questions and answers, and other pertinent information)

SBA—Small Business Size Standards matched to the North American Industry Classification System (NAICS): <http://www.census.gov/eos/www/naics/> and <http://www.sba.gov/content/table-small-business-size-standards>.

In collecting the information requested by this form, the Department of Transportation (Department) complies with the provisions of the Federal Freedom of Information and Privacy Acts (5 U.S.C. 552 and 552a). The Privacy Act provides comprehensive protections for your personal information. This includes how information is collected, used, disclosed, stored, and discarded. Your information will not be disclosed to third parties without your consent. The information collected will be used solely to determine your firm's eligibility to participate in the Department's Disadvantaged Business Enterprise Program as defined in 49 CFR §26.5 and the Airport Concession Disadvantaged Business Enterprise Program as defined in 49 CFR §23.3. You may review DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477).

Under 49 C.F.R. §26.107, dated February 2, 1999 and January 28, 2011, if at any time, the Department or a recipient has reason to believe that any person or firm has willfully and knowingly provided incorrect information or made false statements, the Department may initiate suspension or debarment proceedings against the person or firm under 2 CFR Parts 180 and 1200, Nonprocurement Suspension and Debarment, take enforcement action under 49 C.F.R. Part 31, Program Fraud and Civil Remedies, and/or refer the matter to the Department of Justice for criminal prosecution under 18 U.S.C. 1001, which prohibits false statements in Federal programs.



**INSTRUCTIONS FOR COMPLETING THE
DISADVANTAGED BUSINESS ENTERPRISE (DBE)
AIRPORT CONCESSIONS DISADVANTAGED BUSINESS ENTERPRISE (ACDBE)
UNIFORM CERTIFICATION APPLICATION**

NOTE: All participating firms must be for-profit enterprises. If your firm is not for profit, then you do NOT qualify for the DBE/ACDBE program and should not complete this application. If you require additional space for any question in this application, please attach additional sheets or copies as needed, taking care to indicate on each attached sheet/copy the section and number of this application to which it refers.

Section 1: CERTIFICATION INFORMATION

A. Basic Contact Information

- (1) Enter the contact name and title of the person completing this application and the person who will serve as your firm's contact for this application.
- (2) Enter the legal name of your firm, as indicated in your firm's Articles of Incorporation or charter.
- (3) Enter the primary phone number of your firm.
- (4) Enter a secondary phone number, if any.
- (5) Enter your firm's fax number, if any.
- (6) Enter the contact person's email address.
- (7) Enter your firm's website addresses, if any.
- (8) Enter the street address of the firm where its offices are physically located (not a P.O. Box).
- (9) Enter the mailing address of your firm, if it is different from your firm's street address.

B. Prior/Other Certifications and Applications

- (10) Check the appropriate box indicating whether your firm is currently certified in the DBE/ACDBE programs, and provide the name of the certifying agency that certified your firm. List the dates of any site visits conducted by your home state and any other states or UCP members. Also provide the names of state/UCP members that conducted the review.
- (11) Indicate whether your firm or any of the persons listed has ever been denied certification as a DBE, 8(a), or Small Disadvantaged Business (SDB) firm, or state and local MBE/WBE firm. Indicate if the firm has ever been decertified from one of these programs. Indicate if the application was withdrawn or whether the firm was debarred, suspended, or otherwise had its bidding privileges denied or restricted by any state or local agency, or Federal entity. If your answer is yes, identify the name of the agency, and explain fully the nature of the action in the space provided. Indicate if you have ever appealed this decision to the Department and if so, attach a copy of USDOT's final agency decision(s).

Section 2: GENERAL INFORMATION

A. Business profile:

- (1) Give a concise description of the firm's primary activities, the product(s) or services the company provides, or type of construction. If your company offers more than one product/service, list primary product or service first (attach additional sheets if necessary). This description may be used in our UCP online directory if you are certified as a DBE.

- (2) If you know the appropriate NAICS Code for the line(s) of work you identified in your business profile, enter the codes in the space provided.
- (3) State the date on which your firm was established as stated in your firm's Articles of Incorporation or charter.
- (4) State the date each person became a firm owner.
- (5) Check the appropriate box describing the manner in which you and each other owner acquired ownership of your firm. If you checked "Other," explain in the space provided.
- (6) Check the appropriate box that indicates whether your firm is "for profit." If you checked "No," then you do NOT qualify for the DBE/ACDBE program and should not complete this application. All participating firms must be for-profit enterprises. If the firm is a for profit enterprise, provide the Federal Tax ID number as stated on your firm's Federal tax return.
- (7) Check the appropriate box that describes the type of legal business structure of your firm, as indicated in your firm's Articles of Incorporation or similar document. Identify all joint venture partners if applicable. If you checked "Other," briefly explain in the space provided.
- (8) Indicate in the spaces provided how many employees your firm has, specifying the number of employees who work on a full-time, part-time, and seasonal basis. Attach a list of employees, their job titles, and dates of employment, to your application.
- (9) Specify the firm's gross receipts for each of the past three years, as stated in your firm's filed Federal tax returns. You must submit complete copies of the firm's Federal tax returns for each year. If there are any affiliates or subsidiaries of the applicant firm or owners, you must provide these firms' gross receipts and submit complete copies of these firm(s) Federal tax returns. Affiliation is defined in 49 C.F.R. §26.5 and 13 C.F.R. Part 121.

B. Relationships and Dealings with Other Businesses

- (1) Check the appropriate box that indicates whether your firm is co-located at any of its business locations, or whether your firm shares a telephone number(s), a post office box, any office space, a yard, warehouse, other facilities, any equipment, financing, or any office staff and/or employees with any other business, organization or entity of any kind. If you answered "Yes," then specify the name of the other firm(s) and fully explain the nature of your relationship with these other businesses by identifying the business or person with whom you have any formal, informal, written, or



oral agreement. Provide an explanation of any items shared with other firms in the space provided.

- (2) Check the appropriate box indicating whether any other firm currently has or had an ownership interest in your firm at present or at any time in the past. If you checked yes, please explain.
- (3) Check the appropriate box that indicates whether at present or at any time in the past your firm:
 - (a) ever existed under different ownership, a different type of ownership, or a different name;
 - (b) existed as a subsidiary of any other firm;
 - (c) existed as a partnership in which one or more of the partners are/were other firms;
 - (d) owned any percentage of any other firm; and
 - (e) had any subsidiaries of its own.
- (f) served as a subcontractor with another firm constituting more than 25% of your firm's receipts.

If you answered "Yes" to any of the questions in (3)(a-f), you may be asked to explain the arrangement in detail.

Section 3: MAJORITY OWNER INFORMATION

Identify all individuals or holding companies with any ownership interest in your firm, providing the information requested below (if your firm has more than one owner, provide completed copies of this section for each owner):

A. Identify the majority owner of the firm holding 51% or more ownership interest

- (1) Enter the full name of the owner.
- (2) Enter his/her title or position within your firm.
- (3) Give his/her home phone number.
- (4) Enter his/her home (street) address.
- (5) Indicate this owner's gender.
- (6) Identify the owner's ethnic group membership. If you checked "Other," specify this owner's ethnic group/identity not otherwise listed.
- (7) Check the appropriate box to indicate whether this owner is a U.S. citizen or a lawfully admitted permanent resident. If this owner is neither a U.S. citizen nor a lawfully admitted permanent resident of the U.S., then this owner is NOT eligible for certification as a DBE owner.
- (8) Enter the number of years during which this owner has been an owner of your firm.
- (9) Indicate the percentage of the total ownership this person holds and the date acquired, including (if appropriate), the class of stock owned.
- (10) Indicate the dollar value of this owner's initial investment to acquire an ownership interest in your firm, broken down by cash, real estate, equipment, and/or other investment. Describe how you acquired your business and attach documentation substantiating this investment.

B. Additional Owner Information

- (1) Describe the familial relationship of this owner to each other owner of your firm and employees.
- (2) Indicate whether this owner performs a management or supervisory function for any other business. If you

checked "Yes," state the name of the other business and this owner's function/title held in that business.

- (3) (a) Check the appropriate box that indicates whether this owner owns or works for any other firm(s) that has any relationship with your firm. If you checked "Yes," identify the name of the other business, the nature of the business relationship, and the owner's function at the firm.
 - (b) If the owner works for any other firm, non-profit organization, or is engaged in any other activity more than 10 hours per week, please identify this activity.
- (4) (a) Provide the personal net worth of the owner applying for certification in the space provided. Complete and attach the accompanying "Personal Net Worth Statement for DBE/ACDBE Program Eligibility" with your application. Note, complete this section and accompanying statement only for each owner applying for DBE qualification (i.e., for each owner claiming to be socially and economically disadvantaged).
 - (b) Check the appropriate box that indicates whether any trust has been created for the benefit of the disadvantaged owner(s). If you answered "Yes," you may be asked to provide a copy of the trust instrument.
- (5) Check the appropriate to indicate whether any of your immediate family members, managers, or employees, own, manage, or are associated with another company. Immediate family member is defined in 49 C.F.R. §26.5. If you answered "Yes," provide the name of each person, your relationship to them, the name of the company, the type of business, and whether they own or manage the company.

Section 4: CONTROL

A. Identify the firm's Officers and Board of Directors

- (1) In the space provided, state the name, title, date of appointment, ethnicity, and gender of each officer.
- (2) In the space provided, state the name, title, date of appointment, ethnicity, and gender of each individual serving on your firm's Board of Directors.
- (3) Check the appropriate box to indicate whether any of your firm's officers and/or directors listed above performs a management or supervisory function for any other business. If you answered "Yes," identify each person by name, his/her title, the name of the other business in which s/he is involved, and his/her function performed in that other business.
- (4) Check the appropriate box that indicates whether any of your firm's officers and/or directors listed above own or work for any other firm(s) that has a relationship with your firm. (e.g., ownership interest, shared office space, financial investments, equipment leases, personnel sharing, etc.) If you answered "Yes," identify the name of the firm, the individual's name, and the nature of his/her business relationship with that other firm.



B. Duties of Owners, Officers, Directors, Managers and Key Personnel

(1), (2) Specify the roles of the majority and minority owners, directors, officers, and managers, and key personnel who control the functions listed for the business. Submit résumés for each owner and non-owner identified below. State the name of the individual, title, race and gender and percentage ownership if any. Circle the frequency of each person's involvement as follows: "always, frequently, seldom, or never" in each area.

Indicate whether any of the persons listed in this section perform a management or supervisory function for any other business. Identify the person, business, and their title/function. Identify if any of the persons listed above own or work for any other firm(s) that has a relationship with this firm (e.g. ownership interest, shared office space, financial investment, equipment, leases, personnel sharing, etc.) If you answered "Yes," describe the nature of his/her business relationship with that other firm.

C. Inventory: Indicate firm inventory in these categories:

(1) Equipment and Vehicles

State the make and model, and current dollar value of each piece of equipment and motor vehicle held and/or used by your firm. Indicate whether each piece is either owned or leased by your firm or owner, whether it is used as collateral, and where this item is stored.

(2) Office Space

State the street address of each office space held and/or used by your firm. Indicate whether your firm or owner owns or leases the office space and the current dollar value of that property or its lease.

(3) Storage Space

State the street address of each storage space held and/or used by your firm. Indicate whether your firm or owner owns or leases the storage space and the current dollar value of that property or its lease. Provide a signed lease agreement for each property.

D. Does your firm rely on any other firm for management functions or employee payroll?

Check the appropriate box that indicates whether your firm relies on any other firm for management functions or for employee payroll. If you answered "Yes," you may be asked to explain the nature of that reliance and the extent to which the other firm carries out such functions.

E. Financial / Banking Information

Banking Information. State the name, City and State of your firm's bank. In the space provided, identify the persons able to sign checks on this account. Provide bank authorization and signature cards

Bonding Information. State your firm's bonding limits (in dollars), specifying both the aggregate and project limits.

F. Sources, amounts, and purposes of money loaned to your firm, including the names of persons or firms guaranteeing the loan.

State the name and address of each source, the name of person securing the loan, original dollar amount and the current balance of each loan, and the purpose for which each loan was made to your firm. Provide copies of signed loan agreements and security agreements

G. Contributions or transfers of assets to/from your firm and to/from any of its owners or another individual over the past two years:

Indicate in the spaces provided, the type of contribution or asset that was transferred, its current dollar value, the person or firm from whom it was transferred, the person or firm to whom it was transferred, the relationship between the two persons and/or firms, and the date of the transfer.

H. Current licenses/permits held by any owner or employee of your firm.

List the name of each person in your firm who holds a professional license or permit, the type of permit or license, the expiration date of the permit or license, and issuing State of the license or permit. Attach copies of licenses, license renewal forms, permits, and haul authority forms.

I. Largest contracts completed by your firm in the past three years, if any.

List the name of each owner or contractor for each contract, the name and location of the projects under each contract, the type of work performed on each contract, and the dollar value of each contract.

J. Largest active jobs on which your firm is currently working.

For each active job listed, state the name of the prime contractor and the project number, the location, the type of work performed, the project start date, the anticipated completion date, and the dollar value of the contract.

AIRPORT CONCESSION (ACDBE) APPLICANTS


Identify the concession space, address and location at the airport, the value of the property or lease, and fees/lease payments paid to the airport. Provide information concerning any other airport concession businesses the applicant firm or any affiliate owns and/or operates, including name, location, type of concession, and start date of the concession enterprise.

AFFIDAVIT & SIGNATURE

The Affidavit of Certification must accompany your application for certification. Carefully read the attached affidavit in its entirety. Fill in the required information for each blank space, and sign and date the affidavit in the presence of a Notary Public, who must then notarize the form.

Section 1: CERTIFICATION INFORMATION				
A. Basic Contact Information				
(1) Contact person and Title: _____		(2) Legal name of firm: _____		
(3) Phone #: (____) ____ - ____ (4) Other Phone #: (____) ____ - ____ (5) Fax #: (____) ____ - ____				
(6) E-mail: _____		(7) Firm Websites: _____		
(8) Street address of firm (No P.O. Box): _____	City: _____	County/Parish: _____	State: _____	Zip: _____
(9) Mailing address of firm (if different): _____	City: _____	County/Parish: _____	State: _____	Zip: _____
B. Prior/Other Certifications and Applications				
(10) Is your firm currently certified for any of the following U.S. DOT programs? <input type="checkbox"/> DBE <input type="checkbox"/> ACDBE Names of certifying agencies: _____				
<small>⊗ If you are certified in your home state as a DBE/ACDBE, you do <u>not</u> have to complete this application for other states. Ask your state UCP about the interstate certification process.</small>				
List the dates of any site visits conducted by your home state and any other states or UCP members:				
Date ____/____/____ State/UCP Member: _____ Date ____/____/____ State/UCP Member: _____				
(11) Indicate whether the firm or any persons listed in this application have ever been:				
(a) Denied certification or decertified as a DBE, ACDBE, 8(a), SDB, MBE/WBE firm? <input type="checkbox"/> Yes <input type="checkbox"/> No (b) Withdrawn an application for these programs, or debarred or suspended or otherwise had bidding privileges denied or restricted by any state or local agency, or Federal entity? <input type="checkbox"/> Yes <input type="checkbox"/> No				
If yes, explain the nature of the action. (If you appealed the decision to DOT or another agency, attach a copy of the decision, _____)				
Section 2: GENERAL INFORMATION				
A. Business Profile: (1) Give a concise description of the firm's primary activities and the product(s) or service(s) it provides. If your company offers more than one product/service, list the primary product or service first. Please use additional paper if necessary. This description may be used in our database and the UCP online directory if you are certified as a DBE or ACDBE.				

(2) Applicable NAICS Codes for this line of work include: _____				
(3) This firm was established on ____/____/____ (4) I/We have owned this firm since: ____/____/____				
(5) Method of acquisition (Check all that apply):				
<input type="checkbox"/> Started new business <input type="checkbox"/> Bought existing business <input type="checkbox"/> Inherited business <input type="checkbox"/> Secured concession <input type="checkbox"/> Merger or consolidation <input type="checkbox"/> Other (explain) _____				
U.S. DOT Uniform DBE / ACDBE Certification Application • Page 5 of 15				



(6) Is your firm "for profit"? ☐ Yes ☐ No → **⊗ STOP!** If your firm is NOT for-profit, then you do NOT qualify for this program and should not fill out this application.
 Federal Tax ID# _____

(7) Type of Legal Business Structure: (check all that apply):
☐ Sole Proprietorship ☐ Limited Liability Partnership
☐ Partnership ☐ Corporation
☐ Limited Liability Company ☐ Joint Venture (Identify all JV partners _____)
☐ Applying as an ACDBE ☐ Other, Describe _____

(8) Number of employees: Full-time _____ Part-time _____ Seasonal _____ Total _____
 (Provide a list of employees, their job titles, and dates of employment, to your application).

(9) Specify the firm's gross receipts for the last 3 years. (Submit complete copies of the firm's Federal tax returns for each year. If there are affiliates or subsidiaries of the applicant firm or owners, you must submit complete copies of these firms' Federal tax returns).

Year _____	Gross Receipts of Applicant Firm \$ _____	Gross Receipts of Affiliate Firms \$ _____
Year _____	Gross Receipts of Applicant Firm \$ _____	Gross Receipts of Affiliate Firms \$ _____
Year _____	Gross Receipts of Applicant Firm \$ _____	Gross Receipts of Affiliate Firms \$ _____

B. Relationships and Dealings with Other Businesses

(1) Is your firm co-located at any of its business locations, or does it share a telephone number, P.O. Box, office or storage space, yard, warehouse, facilities, equipment, inventory, financing, office staff, and/or employees with any other business, organization, or entity? ☐ Yes ☐ No
 If Yes, explain the nature of your relationship with these other businesses by identifying the business or person with whom you have any formal, informal, written, or oral agreement. Also detail the items shared.

(2) Has any other firm had an ownership interest in your firm at present or at any time in the past?
☐ Yes ☐ No If Yes, explain _____

(3) At present, or at any time in the past, has your firm:
 (a) Ever existed under different ownership, a different type of ownership, or a different name? ☐ Yes ☐ No
 (b) Existed as a subsidiary of any other firm? ☐ Yes ☐ No
 (c) Existed as a partnership in which one or more of the partners are/were other firms? ☐ Yes ☐ No
 (d) Owned any percentage of any other firm? ☐ Yes ☐ No
 (e) Had any subsidiaries? ☐ Yes ☐ No
 (f) Served as a subcontractor with another firm constituting more than 25% of your firm's receipts? ☐ Yes ☐ No

(If you answered "Yes" to any of the questions in (2) and/or (3)(a)-(f), you may be asked to provide further details and explain whether the arrangement continues).


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Section 3: MAJORITY OWNER INFORMATION													
A. Identify the majority owner of the firm holding 51% or more ownership interest.													
(1) Full Name: _____	(2) Title: _____	(3) Home Phone #: _____ () - -											
(4) Home Address (Street and Number): _____	City: _____	State: _____	Zip: _____										
(5) Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female	(8) Number of years as owner: _____												
(6) Ethnic group membership (Check all that apply):													
<input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> Asian Pacific <input type="checkbox"/> Native American <input type="checkbox"/> Subcontinent Asian <input type="checkbox"/> Other (specify) _____													
(7) U.S. Citizenship:													
<input type="checkbox"/> U.S. Citizen <input type="checkbox"/> Lawfully Admitted Permanent Resident													
(9) Percentage owned: _____ % Class of stock owned: _____ Date acquired: _____													
(10) Initial investment to acquire ownership interest in firm: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Type</th> <th style="text-align: left; border-bottom: 1px solid black;">Dollar Value</th> </tr> </thead> <tbody> <tr> <td>Cash</td> <td>\$ _____</td> </tr> <tr> <td>Real Estate</td> <td>\$ _____</td> </tr> <tr> <td>Equipment</td> <td>\$ _____</td> </tr> <tr> <td>Other</td> <td>\$ _____</td> </tr> </tbody> </table>				Type	Dollar Value	Cash	\$ _____	Real Estate	\$ _____	Equipment	\$ _____	Other	\$ _____
Type	Dollar Value												
Cash	\$ _____												
Real Estate	\$ _____												
Equipment	\$ _____												
Other	\$ _____												
Describe how you acquired your business: <input type="checkbox"/> Started business myself <input type="checkbox"/> It was a gift from: _____ <input type="checkbox"/> I bought it from: _____ <input type="checkbox"/> I inherited it from: _____ <input type="checkbox"/> Other _____													
(Attach documentation substantiating your investment)													
B. Additional Owner Information													
(1) Describe familial relationship to other owners and employees:													

(2) Does this owner perform a management or supervisory function for any other business? <input type="checkbox"/> Yes <input type="checkbox"/> No													
If Yes, identify: Name of Business: _____ Function/Title: _____													
(3)(a) Does this owner own or work for any other firm(s) that has a relationship with this firm? (e.g., ownership interest, shared office space, financial investments, equipment, leases, personnel sharing, etc.) <input type="checkbox"/> Yes <input type="checkbox"/> No													
Identify the name of the business, and the nature of the relationship, and the owner's function at the firm:													

(b) Does this owner work for any other firm, non-profit organization, or is engaged in any other activity more than 10 hours per week? If yes, identify this activity: _____													
(4)(a) What is the personal net worth of this disadvantaged owner applying for certification ? \$ _____													
(b) Has any trust been created for the benefit of this disadvantaged owner(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No													
(If Yes, you may be asked to provide a copy of the trust instrument).													
(5) Do any of your immediate family members, managers, or employees own, manage, or are associated with another company? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide their name, relationship, company, type of business, and indicate whether they own or manage the company: (Please attach extra sheets, if needed): _____													

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Section 3: OWNER INFORMATION, Cont'd.

A. Identify all individuals, firms, or holding companies that hold LESS THAN 51% ownership interest in the firm (Attach separate sheets for each additional owner)

(1) Full Name: _____ (2) Title: _____ (3) Home Phone #: _____
 () - _____

(4) Home Address (Street and Number): _____ City: _____ State: _____ Zip: _____

(5) Gender: ☐ Male ☐ Female

(6) Ethnic group membership (Check all that apply)

☐ Black ☐ Hispanic
☐ Asian Pacific ☐ Native American
☐ Subcontinent Asian
☐ Other (specify) _____

(7) U.S. Citizenship:

☐ U.S. Citizen
☐ Lawfully Admitted Permanent Resident

(8) Number of years as owner: _____

(9) Percentage owned: _____ %
 Class of stock owned: _____
 Date acquired: _____

(10) Initial investment to acquire ownership interest in firm:

Type	Dollar Value
Cash	\$ _____
Real Estate	\$ _____
Equipment	\$ _____
Other	\$ _____

Describe how you acquired your business:

☐ Started business myself
☐ It was a gift from: _____
☐ I bought it from: _____
☐ I inherited it from: _____
☐ Other _____

(Attach documentation substantiating your investment)

B. Additional Owner Information

(1) Describe familial relationship to other owners and employees:

(2) Does this owner perform a management or supervisory function for any other business? ☐ Yes ☐ No
 If Yes, identify: Name of Business: _____ Function/Title: _____

(3)(a) Does this owner own or work for any other firm(s) that has a relationship with this firm? (e.g., ownership interest, shared office space, financial investments, equipment, leases, personnel sharing, etc.) ☐ Yes ☐ No
 Identify the name of the business, and the nature of the relationship, and the owner's function at the firm:

(b) Does this owner work for any other firm, non-profit organization, or is engaged in any other activity more than 10 hours per week? If yes, identify this activity: _____

(4)(a) What is the personal net worth of this disadvantaged owner applying for certification? \$ _____

(b) Has any trust been created for the benefit of this disadvantaged owner(s)? ☐ Yes ☐ No
 (If Yes, you may be asked to provide a copy of the trust instrument).

(5) Do any of your immediate family members, managers, or employees own, manage, or are associated with another company? ☐ Yes ☐ No If Yes, provide their name, relationship, company, type of business, and indicate whether they own or manage: (Please attach extra sheets, if needed): _____

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Section 4: CONTROL



A. Identify your firm's Officers and Board of Directors (If additional space is required, attach a separate sheet):

	Name	Title	Date Appointed	Ethnicity	Gender
(1) Officers of the Company	(a)				
	(b)				
	(c)				
	(d)				
(2) Board of Directors	(a)				
	(b)				
	(c)				
	(d)				

(3) Do any of the persons listed above perform a management or supervisory function for any other business?

☐ Yes ☐ No If Yes, identify for each:

Person: _____ Title: _____
 Business: _____ Function: _____

Person: _____ Title: _____
 Business: _____ Function: _____

(4) Do any of the persons listed in section A above own or work for any other firm(s) that has a relationship with this firm? (e.g., ownership interest, shared office space, financial investments, equipment, leases, personnel sharing, etc.)

☐ Yes ☐ No If Yes, identify for each:

Firm Name: _____ Person: _____
 Nature of Business Relationship: _____

B. Duties of Owners, Officers, Directors, Managers, and Key Personnel

1. (Identify your firm's management personnel who control your firm in the following areas (Attach separate sheets as needed).)

A = Always F = Frequently	S = Seldom N = Never	Majority Owner (51% or more)				Minority Owner (49% or less)			
		Name:	Title:	Percent Owned:		Name:	Title:	Percent Owned:	
Sets policy for company direction/scope of operations		A	F	S	N	A	F	S	N
Bidding and estimating		A	F	S	N	A	F	S	N
Major purchasing decisions		A	F	S	N	A	F	S	N
Marketing and sales		A	F	S	N	A	F	S	N
Supervises field operations		A	F	S	N	A	F	S	N
Attend bid opening and lettings		A	F	S	N	A	F	S	N
Perform office management (billing, accounts receivable/payable, etc.)		A	F	S	N	A	F	S	N
Hires and fires management staff		A	F	S	N	A	F	S	N
Hire and fire field staff or crew		A	F	S	N	A	F	S	N
Designates profits spending or investment		A	F	S	N	A	F	S	N
Obligates business by contract/credit		A	F	S	N	A	F	S	N
Purchase equipment		A	F	S	N	A	F	S	N
Signs business checks		A	F	S	N	A	F	S	N

2. Complete for all Officers, Directors, Managers, and Key Personnel who control the following functions for the firm. (Attach separate sheets as needed).

A = Always S = Seldom F = Frequently N = Never	Officer/Director/Manager/Key Personnel				Officer/Director/Manager/Key Personnel			
	Name: _____ Title: _____ Race and Gender: _____ Percent Owned: _____				Name: _____ Title: _____ Race and Gender: _____ Percent Owned: _____			
Sets policy for company direction/scope of operations	A	F	S	N	A	F	S	N
Bidding and estimating	A	F	S	N	A	F	S	N
Major purchasing decisions	A	F	S	N	A	F	S	N
Marketing and sales	A	F	S	N	A	F	S	N
Supervises field operations	A	F	S	N	A	F	S	N
Attend bid opening and lettings	A	F	S	N	A	F	S	N
Perform office management (billing, accounts receivable/payable, etc.)	A	F	S	N	A	F	S	N
Hires and fires management staff	A	F	S	N	A	F	S	N
Hire and fire field staff or crew	A	F	S	N	A	F	S	N
Designates profits spending or investment	A	F	S	N	A	F	S	N
Obligates business by contract/credit	A	F	S	N	A	F	S	N
Purchase equipment	A	F	S	N	A	F	S	N
Signs business checks	A	F	S	N	A	F	S	N

Do any of the persons listed in B1 or B2 perform a management or supervisory function for any other business? If Yes, identify the person, the business, and their title/function: _____

Do any of the persons listed above own or work for any other firm(s) that has a relationship with this firm? (e.g., ownership interest, shared office space, financial investments, equipment, leases, personnel sharing, etc.) If Yes, describe the nature of the business relationship: _____


C. Inventory: Indicate your firm's inventory in the following categories (Please attach additional sheets if needed):

1. Equipment and Vehicles

Make and Model	Current Value	Owned or Leased by Firm or Owner?	Used as collateral?	Where is item stored?
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				

2. Office Space

Street Address	Owned or Leased by Firm or Owner?	Current Value of Property or Lease



3. Storage Space *(Provide signed lease agreements for the properties listed)*

Street Address	Owned or Leased by Firm or Owner?	Current Value of Property or Lease
_____	_____	_____
_____	_____	_____

D. Does your firm rely on any other firm for management functions or employee payroll? ☐ Yes ☐ No

E. Financial/Banking Information *(Provide bank authorization and signature cards)*

Name of bank: _____ City and State: _____
 The following individuals are able to sign checks on this account: _____

Name of bank: _____ City and State: _____
 The following individuals are able to sign checks on this account: _____

Bonding Information: If you have bonding capacity, identify the firm's bonding aggregate and project limits:
 Aggregate limit \$ _____ Project limit \$ _____

F. Identify all sources, amounts, and purposes of money loaned to your firm including from financial institutions. Identify whether you the owner and any other person or firm loaned money to the applicant DBE/ACDBE. Include the names of any persons or firms guaranteeing the loan, if other than the listed owner.
(Provide copies of signed loan agreements and security agreements).

Name of Source	Address of Source	Name of Person Guaranteeing the Loan	Original Amount	Current Balance	Purpose of Loan
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____

G. List all contributions or transfers of assets to/from your firm and to/from any of its owners or another individual over the past two years *(Attach additional sheets if needed):*

Contribution/Asset	Dollar Value	From Whom Transferred	To Whom Transferred	Relationship	Date of Transfer
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____

H. List current licenses/permits held by any owner and/or employee of your firm
(e.g. contractor, engineer, architect, etc.)(Attach additional sheets if needed):

Name of License/Permit Holder	Type of License/Permit	Expiration Date	State
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

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I. List the three largest contracts completed by your firm in the past three years, if any:			
Name of Owner/Contractor	Name/Location of Project	Type of Work Performed	Dollar Value of Contract
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

J. List the three largest active jobs on which your firm is currently working:					
Name of Prime Contractor and Project Number	Location of Project	Type of Work	Project Start Date	Anticipated Completion Date	Dollar Value of Contract
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____

AIRPORT CONCESSION (ACDBE) APPLICANTS ONLY MUST COMPLETE THIS SECTION

Identify the following information concerning the ACDBE applicant firm:

<u>Concession Space</u>	<u>Address / Location at Airport</u>	<u>Value of Property or Lease</u>	<u>Fees/Lease Payments Paid to the Airport</u>

Provide information concerning any other airport concession businesses the applicant firm or any affiliate owns and/or operates, including name, location, type of concession, and start date of concession

<u>Name of Concession</u>	<u>Location</u>	<u>Type of Concession</u>	<u>Start Date of Concession</u>

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**AFFIDAVIT OF CERTIFICATION**

This form must be signed and notarized for each owner upon which disadvantaged status is relied.

A MATERIAL OR FALSE STATEMENT OR OMISSION MADE IN CONNECTION WITH THIS APPLICATION IS SUFFICIENT CAUSE FOR DENIAL OF CERTIFICATION, REVOCATION OF A PRIOR APPROVAL, INITIATION OF SUSPENSION OR DEBARMENT PROCEEDINGS, AND MAY SUBJECT THE PERSON AND/OR ENTITY MAKING THE FALSE STATEMENT TO ANY AND ALL CIVIL AND CRIMINAL PENALTIES AVAILABLE PURSUANT TO APPLICABLE FEDERAL AND STATE LAW.

I _____ (full name printed),
swear or affirm under penalty of law that I am
_____ (title) of the applicant firm

and that I have read and understood all of the questions in this application and that all of the foregoing information and statements submitted in this application and its attachments and supporting documents are true and correct to the best of my knowledge, and that all responses to the questions are full and complete, omitting no material information. The responses include all material information necessary to fully and accurately identify and explain the operations, capabilities and pertinent history of the named firm as well as the ownership, control, and affiliations thereof.

I recognize that the information submitted in this application is for the purpose of inducing certification approval by a government agency. I understand that a government agency may, by means it deems appropriate, determine the accuracy and truth of the statements in the application, and I authorize such agency to contact any entity named in the application, and the named firm's bonding companies, banking institutions, credit agencies, contractors, clients, and other certifying agencies for the purpose of verifying the information supplied and determining the named firm's eligibility.

I agree to submit to government audit, examination and review of books, records, documents and files, in whatever form they exist, of the named firm and its affiliates, inspection of its places(s) of business and equipment, and to permit interviews of its principals, agents, and employees. I understand that refusal to permit such inquiries shall be grounds for denial of certification.

If awarded a contract, subcontract, concession lease or sublease, I agree to promptly and directly provide the prime contractor, if any, and the Department, recipient agency, or federal funding agency on an ongoing basis, current, complete and accurate information regarding (1) work performed on the project; (2) payments; and (3) proposed changes, if any, to the foregoing arrangements.

I agree to provide written notice to the recipient agency or Unified Certification Program of any material change in the information contained in the original application within 30 calendar days of such change (e.g., ownership changes, address/telephone number, personal net worth exceeding \$1.32 million, etc.).

I acknowledge and agree that any misrepresentations in this application or in records pertaining to a contract or subcontract will be grounds for terminating any contract or subcontract which may be awarded; denial or revocation of certification; suspension and debarment; and for initiating action under federal and/or state law concerning false statement, fraud or other applicable offenses.

I certify that I am a socially and economically disadvantaged individual who is an owner of the above-referenced firm seeking certification as a Disadvantaged Business Enterprise or Airport Concession Disadvantaged Business Enterprise. In support of my application, I certify that I am a member of one or more of the following groups, and that I have held myself out as a member of the group(s): (Check all that apply):

☐ Female ☐ Black American ☐ Hispanic American
☐ Native American ☐ Asian-Pacific American
☐ Subcontinent Asian American ☐ Other (specify) _____

I certify that I am socially disadvantaged because I have been subjected to racial or ethnic prejudice or cultural bias, or have suffered the effects of discrimination, because of my identity as a member of one or more of the groups identified above, without regard to my individual qualities.

I further certify that my personal net worth does not exceed \$1.32 million, and that I am economically disadvantaged because my ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same or similar line of business who are not socially and economically disadvantaged.

I declare under penalty of perjury that the information provided in this application and supporting documents is true and correct.

Signature _____ (DBE/ACDBE Applicant) (Date) _____

NOTARY CERTIFICATE



UNIFORM CERTIFICATION APPLICATION SUPPORTING DOCUMENTS CHECKLIST

In order to complete your application for DBE or ACDBE certification, you must attach copies of all of the following REQUIRED documents. A failure to supply any information requested by the UCP may result in your firm denied DBE/ACDBE certification.

Required Documents for All Applicants

- ☐ Résumés (that include places of employment with corresponding dates), for all owners, officers, and key personnel of the applicant firm
- ☐ Personal Net Worth Statement for each socially and economically disadvantaged owners comprising 51% or more of the ownership percentage of the applicant firm.
- ☐ Personal Federal tax returns for the past 3 years, if applicable, for each disadvantaged owner
- ☐ Federal tax returns (and requests for extensions) filed by the firm and its affiliates with related schedules, for the past 3 years.
- ☐ Documented proof of contributions used to acquire ownership for each owner (e.g., both sides of cancelled checks)
- ☐ Signed loan and security agreements, and bonding forms
- ☐ List of equipment and/or vehicles owned and leased including VIN numbers, copy of titles, proof of ownership, insurance cards for each vehicle.
- ☐ Title(s), registration certificate(s), and U.S. DOT numbers for each truck owned or operated by your firm
- ☐ Licenses, license renewal forms, permits, and haul authority forms
- ☐ Descriptions of all real estate (including office/storage space, etc.) owned/leased by your firm and documented proof of ownership/signed leases
- ☐ Documented proof of any transfers of assets to/from your firm and/or to/from any of its owners over the past 2 years
- ☐ DBE/ACDBE and SBA 8(a), SDB, MBE/WBE certifications, denials, and/or decertifications, if applicable; and any U.S. DOT appeal decisions on these actions.
- ☐ Bank authorization and signatory cards
- ☐ Schedule of salaries (or other remuneration) paid to all officers, managers, owners, and/or directors of the firm
- ☐ List of all employees, job titles, and dates of employment.
- ☐ Proof of warehouse/storage facility ownership or lease arrangements

Partnership or Joint Venture

- ☐ Original and any amended Partnership or Joint Venture Agreements

Corporation or LLC

- ☐ Official Articles of Incorporation (signed by the state official)
- ☐ Both sides of all corporate stock certificates and your firm's stock transfer ledger
- ☐ Shareholders' Agreement(s)
- ☐ Minutes of all stockholders and board of directors meetings

- ☐ Corporate by-laws and any amendments
- ☐ Corporate bank resolution and bank signature cards
- ☐ Official Certificate of Formation and Operating Agreement with any amendments (for LLCs)

Optional Documents to Be Provided on Request

The UCP to which you are applying may require the submission of the following documents. If requested to provide these documents, you must supply them with your application or at the on-site visit.

- ☐ Proof of citizenship
- ☐ Insurance agreements for each truck owned or operated by your firm
- ☐ Audited financial statements (if available)
- ☐ Personal Federal Tax returns for the past 3 years, if applicable, for other disadvantaged owners of the firm.
- ☐ Trust agreements held by any owner claiming disadvantaged status
- ☐ Year-end balance sheets and income statements for the past 3 years (or life of firm, if less than three years)

Suppliers

- ☐ List of product lines carried and list of distribution equipment owned and/or leased

SECTION VIII – FORMS

CERTIFICATE OF NON-SEGREGATED FACILITIES

41 CFR PART 60-1.8

Notice to Prospective Federally Assisted Construction Contractors

1. A certification of Non-segregated Facilities shall be submitted prior to the award of a federally assisted construction contract exceeding \$10,000, which is not exempt from the provisions of the Equal Opportunity Clause.
2. Contractors receiving federally-assisted construction contract awards exceeding \$10,000, which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for suppliers and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

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

Notice to Prospective Subcontractors of Requirements for Certification of Non-Segregated Facilities

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a subcontract exceeding \$10,000, which is not exempt from the provisions of the Equal Opportunity Clause.
2. Contractors receiving subcontract awards exceeding \$10,000, which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

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

CERTIFICATION OF NON-SEGREGATED FACILITIES:

The undersigned federally-assisted construction contractor certified that she or he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that she or he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that she or he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that she or he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained.

The federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any

CERTIFICATE OF NON-SEGREGATED FACILITIES

other reason. The federally-assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain subcontracts exceeding \$10,000, which are not exempt from the provisions of the Equal Opportunity Clause and that she or he will retain such certifications in his files.

Signed and submitted on this date: _____

By this (circle one): Contractor, Subcontractor, or Supplier

Business Name: _____

Address: _____

Telephone Number: _____

Fax Number: _____

Email Address: _____

Name and Title (Printed): _____

Owner or Authorized Signature: _____

Note: This form shall be returned to the Prime Contractor who will forward it to the Engineer.

EEO OFFICER NOTIFICATION AND PROGRAM COMPLIANCE CERTIFICATION

(This form is required annually by companies that perform federally funded contract work in the amount of \$10,000 or more annually)

FROM (Name of Company): _____

_____ Date

TO (Name of Airport Owner): _____

In accordance with the AIP Required Federal Contract Provisions contained in the Supplemental General Provisions of the Contract Documents, the following information is furnished:

Initial Next to Each



THIS IS TO CERTIFY:

_____ This company has accepted the following statement as our operating policy: "It is the policy of this Company to assure the applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: 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, pre-apprenticeship, and/or on-the-job training."

_____ Periodic meetings with supervisory and personnel office employees were conducted before the start of work and will be accomplished once every six (6) months.

_____ All new supervisory or personnel office employees were given a thorough introduction by the EEO Officer, covering all major aspects of the contractor's EEO obligations within 30 days following their employment start date.

_____ All personnel who are engaged in direct recruitment for the project were instructed by the EEO Officer in the contractor's procedures for locating and firing minority group employees.

_____ This company's EEO policy was reviewed and reaffirmed within the last 12 months and was brought to the attention of all our employees by the following means (check as applicable):

☐ Meetings/Briefings

☐ Employee Handbook

☐ Other: _____

_____ A written record was made of the above meetings/briefings, person's attending, and the subject matter that was discussed. Signed acknowledgements of attendance at EEO meetings/training are on file.

_____ I have **attached** a copy of this company's EEO **Appointment Letter** and **Policy Statement**.

***SIGNED CERTIFICATION AND NAME OF CORPORATE EEO OFFICER:**

Signed & Printed Name

Title or Position in Firm

Address (Include Zip Code)

Telephone (Include Area Code)

Email Address: _____

* Named individual must be capable of effectively administering and promoting an active contractor program EEO and who must be assigned adequate authority and responsibility to do so.

CONTRACTOR ACKNOWLEDGEMENT CERTIFICATION
(FOR SUBCONTRACTOR OR SUPPLIER APPROVAL)

Project Name	
AIP Number	
Prime Contractor	
Subcontractor	
Lower Tier Sub. (if applicable)	

ITEMS 1-4 BELOW APPLY, UNLESS OTHERWISE INDICATED

PRIME CONTRACTOR CERTIFICATION: I hereby certify the below documentation (as checked) was included in, and made part of, the subcontractor agreement entered into with the firm named above.

- ☐ 1. AIP Federal Contract Provisions
- ☐ 2. 41 CFR 60-4.2 and 41 CFR 60-4.3 (Solicitations and Equal Opportunity Clauses)*
- ☐ 3. Disadvantaged Business Enterprise (DBE) Policy and DBE Program Requirements
- ☐ 4. Federal Prevailing Wage Rates**
- ☐ 5. State Prevailing Wage Rates**

**Applicable only to contracts of subcontracts in excess of \$10,000*

***Does not apply to material suppliers unless performing work on-site.*

Printed Name: _____ Signature: _____

SUBCONTRACTOR CERTIFICATION: As an authorized official of this company, I certify that the documents selected above were made part of our agreement/contract and give assurance that this company will comply with the AIP Federal Contract Provisions, and will properly obtain approval, before the start of work, for any portion of work sublet to a lower-tier Subcontractor or Material Supplier. I further certify that:

- ☐ 1. This company is in full compliance with applicable Federal and State Laws.
- ☐ 2. This company is properly registered to do business in the Commonwealth of Massachusetts and is in good standing with the Corporation Division of the Secretary of the Commonwealth's Office.
- ☐ 3. This company has attached a Gale Form 2, "Annual Contractor Assurances," unless submitted in the past 12 months, in which case a copy of the previously submitted form is attached.
- ☐ 4. This Company has attached a Massachusetts EEO Attachment A-2, "Subcontractor Certification"
- ☐ 5. This company (check one) [] does, [] does not, anticipate performing work on this contract in the amount of \$10,000 or more annually. **Companies that perform \$10,000 or more of contract work must file a Gale Form 2 annually.**
- ☐ 6. This company (check one) [] has, [] has no, outstanding compliance matters from a previous Federally Funded project.

Firm: _____

Address: _____

Phone: _____

Fed. ID Number: _____

Printed Name and Title

Signature

Date

ANNUAL CONTRACTOR ASSURANCES AIP FUNDED CONTRACTS

(All participants of FAA Airport Improvement Program (AIP) funded contracts are required to submit this form annually)

_____ (Contractor), hereinafter referred to as the "PARTICIPANT," Hereby agrees that as a condition of receiving payment in connection with work performed on any FAA Airport Improvement Program (AIP) assisted contract it will comply with the AIP Federal Contract Provisions, and all requirements imposed by the FAA, the State Department of Transportation, or the Owner pursuant to the implementing regulations, applicable U.S. Department laws, and other pertinent directives, to that end the PARTICIPANT HEREBY GIVES THE FOLLOWING SPECIFIC ASSURANCES with respect to its participation in the FAA Airport Improvement Program:

Initial Next to Each:



1. _____ That the PARTICIPANT shall submit weekly certified payrolls, showing that each employee has been properly classified and paid for the time worked in each classification according to the minimum hourly wage(s) stipulated by the Wage discussion applicable to each of its contracts. The PARTICIPANT shall also be responsible for ensuring compliance of the same for any subcontractor or lower-tier subcontractor with which it holds an agreement under a Federal-aid contract.
2. _____ That the PARTICIPANT shall review the Wage Decision in each of its contracts and submit an Additional Work Classification Request for each classification that does not appear in the applicable Wage Decision; this shall be accomplished before the start of work for each project, regardless of any prior approval for another project in the same county.
3. _____ That the PARTICIPANT shall not sublet, assign or otherwise dispose of any portion of the contract without approval from the Owner and acknowledge that any work performed by an unapproved subcontractor or lower-tier subcontractor shall not be paid for by the Owner.
4. _____ That the PARTICIPANT is in full compliance with the Immigration Reform and Control Act of 1986 and has fulfilled all Form I-9 requirements by verifying identification and authorization to work for each employee reported on the payroll.
5. _____ That the PARTICIPANT acknowledges that any work performed or services provided under an FAA Airport Improvement Program contract shall be considered *satisfactorily completed* and payable only after the PARTICIPANT has fulfilled the contract requirements of the Owner and funding agencies, including the submission of all documentation required by the specifications and the subcontract. Satisfactory Completion is when the Engineer finds the work completed in accordance with the contract, plans and specifications. The determination of whether work meets the standards of satisfactory completion is the responsibility of the Engineer and not the prime contractor. The PARTICIPANT shall not disperse payment for an item of work under the contract without first obtaining certified payrolls from its subcontractors or lower-tier subcontractors, verifying the payment of wages according to paragraph "1." above.

6. _____ That the PARTICIPANT acknowledges that if found to be in violation of the AIP Federal Contract Provisions it shall be required to take corrective action before participating in future projects funded by the FAA. Corrective action shall include, but is not limited to, the submission of certified payrolls or other records and reports necessary to verify compliance with the Provisions.
7. _____ If this project is in New Hampshire, the PARTICIPANT acknowledges that if the project is funded in part by the New Hampshire Department of Transportation, an executive officer or owner of its company may be required to complete 4-hours of Federal Contract Compliance Training if found to have repeatedly violated the Required Contract Provisions. When mandated, Compliance Training must be completed before participation on future projects is authorized. This requirement does not relieve the Contractor of its obligations under the prime contract, nor does it prevent the Department from seeking other remedies or enforcement action, such as suspension or debarment.
8. _____ That the PARTICIPANT, in order to participate in any public project, shall register its business name with the Secretary of State's Office in the state where the project is located and shall remain in *good standing* throughout the period of participation.
9. _____ That the PARTICIPANT shall maintain detailed pay records and other records documenting its compliance, and all efforts to comply, with the nondiscrimination and payroll requirements of the AIP Federal Contract Provisions, and shall make these records available for inspection by authorized representatives of the Owner, the state, the U.S. Department of Labor, and the FAA at reasonable times and places for a period of 3 years following the completion of the contract work.
10. _____ That the PARTICIPANT is fully aware that it may seek compliance assistance and training for itself, its subcontractors, or lower-tier subcontractors by contacting the Owner.
11. _____ That the PARTICIPANT acknowledges that a breach of any of the stipulations contained in the AIP Federal Contract Provisions shall be sufficient grounds for termination of its contract with the Owner. Where the violator is a subcontractor or lower-tier subcontractor, the prime contractor shall be required to terminate its contract and any related contract.

THESE ASSURANCES are given in consideration of and for the purpose of obtaining any and all contracts funded through the Owner under the FAA Airport Improvement Program. The person whose signature appears below is an executive officer or owner of

Name of Firm

Printed Name & Title

Date: _____

Signature

TRANSMITTAL REQUEST FOR CONSENT TO SUBLET

- ☐ SUBCONTRACTOR
- ☐ LOWER TIER SUBCONTRACTOR
- ☐ MATERIAL SUPPLIER (MS)

**** ☐ THIS COMPANY IS A DISADVANTAGED BUSINESS ENTERPRISE (DBE)****

Prime Contractor: _____

Subcontractor: _____

Lower-Tier Subcontractor/MS: _____

Project Name and AIP No: _____

All contract items sublet are to be shown in the following tabulation. Estimated or agreed dollar amounts must be shown individually in the appropriate **PARTIAL** or **COMPLETE** column.

ITEM NUMBER	DESCRIPTION OF ACTUAL WORK TO BE PERFORMED (Use a separate spreadsheet if needed and list total	PARTIAL WORK ON ITEM	COMPLETE ITEM

TOTAL SUBCONTRACT AMOUNT: \$ _____

By: _____
Signature and Title of Prime Contractor **Date**

Signatory agreed and understands that subcontracts will contain, by inclusion or reference, all the pertinent provisions of the Prime Contract. It is further agreed and understood that consent to sublet shall not under any circumstance relieve the Prime Contractor of surety of any of their obligations under the Contract or bonds as specified in the Project Specifications.

FOR GALE OFFICE USE ONLY	
Effective Date:	Consent By
Total Sublet to Date:	
Percent Sublet to Date:	
DBE Commitment % to Date:	
Consent Number:	For GALE Project Manager
Company Code:	

**FEDERAL AVIATION ADMINISTRATION
PROPOSED DISADVANTAGED BUSINESS ENTERPRISE (DBE)
/SMALL BUSINESS (SB) UTILIZATION**

The undersigned Bidder/Offeror has made a good faith effort to make subcontracting and supplier opportunities available to all firms including, but not limited to, DBEs as defined in 49 CFR 26. As a result of these efforts:

The Bidder/Offeror is committed to a minimum of _____ % **DBE** utilization on this Contract.

The DBE participation goal for this contract is ____%. If the Bidder/Offeror is unable to commit to achieving this goal, documentation of good faith efforts must be provided within 48 hours of the bid opening.

Name of Bidder/Offeror's firm: _____

AIP Number: _____

By: _____
Signature Title Date

DBE or Small Business Subcontractor / Supplier

Name of Firm: _____

Proposed Work: _____

Dollar Amount of Work: _____

☐ Gale Form 6 attached (Required for each DBE/Small Business with submission of bid)

DBE or Small Business Subcontractor / Supplier

Name of Firm: _____

Proposed Work: _____

Dollar Amount of Work: _____

☐ Gale Form 6 attached (Required for each DBE/Small Business with submission of bid)

(Attach additional sheets as needed for additional firms)

**PRIME CONTRACTOR
DBE REPORTING INFORMATION FORM**

(To be filled out by the bidder and submitted with their bid package)

Project Name: _____
Airport: _____
AIP Number: _____

Prime Contractor Information

Company Name: _____
Contact Person: _____
Address 1: _____
Address 2: _____
Address 3: _____
City/Town: _____
State: _____
Zip Code: _____
Phone: _____
Fax: _____
Email: _____
NAICS Code: _____

DBE Status:	<input type="checkbox"/> Non-DBE	<input type="checkbox"/> Certified DBE	(Check one)
Small Business Status	<input type="checkbox"/> Non-Small Business	<input type="checkbox"/> Certified Small Business	(Check one)

Signature Title Date

The following section is to be filled out ONLY if Prime Contractor is a DBE.

States with DBE Certification*: (Leave Blank if not a DBE)		Age of Firm: _____ Years							
		Employees: # _____							
Annual Gross Receipts:	<table style="width: 100%;"><tr><td><input type="checkbox"/> <\$1,000,000</td><td><input type="checkbox"/> \$1,000,000 - \$3,000,000</td></tr><tr><td><input type="checkbox"/> \$3,000,000 - \$6,000,000</td><td><input type="checkbox"/> \$6,000,000 - \$10,000,000</td></tr><tr><td><input type="checkbox"/> \$10,000,000 - \$20,000,000</td><td><input type="checkbox"/> >\$20,000,000</td></tr></table>			<input type="checkbox"/> <\$1,000,000	<input type="checkbox"/> \$1,000,000 - \$3,000,000	<input type="checkbox"/> \$3,000,000 - \$6,000,000	<input type="checkbox"/> \$6,000,000 - \$10,000,000	<input type="checkbox"/> \$10,000,000 - \$20,000,000	<input type="checkbox"/> >\$20,000,000
<input type="checkbox"/> <\$1,000,000	<input type="checkbox"/> \$1,000,000 - \$3,000,000								
<input type="checkbox"/> \$3,000,000 - \$6,000,000	<input type="checkbox"/> \$6,000,000 - \$10,000,000								
<input type="checkbox"/> \$10,000,000 - \$20,000,000	<input type="checkbox"/> >\$20,000,000								
Disadvantaged Group Information (DBE/Part 26 Uniform Reporting Requirement)									
Ethnicity (Check One):	<table style="width: 100%;"><tr><td><input type="checkbox"/> Black American</td><td><input type="checkbox"/> Asian-Pacific American</td></tr><tr><td><input type="checkbox"/> Hispanic American</td><td><input type="checkbox"/> Subcontinent Asian American</td></tr><tr><td><input type="checkbox"/> Native American</td><td><input type="checkbox"/> Non-Minority</td></tr></table>			<input type="checkbox"/> Black American	<input type="checkbox"/> Asian-Pacific American	<input type="checkbox"/> Hispanic American	<input type="checkbox"/> Subcontinent Asian American	<input type="checkbox"/> Native American	<input type="checkbox"/> Non-Minority
<input type="checkbox"/> Black American	<input type="checkbox"/> Asian-Pacific American								
<input type="checkbox"/> Hispanic American	<input type="checkbox"/> Subcontinent Asian American								
<input type="checkbox"/> Native American	<input type="checkbox"/> Non-Minority								
Gender (Check One)	<input type="checkbox"/> Male <input type="checkbox"/> Female	Certification:	<input type="checkbox"/> Attached**						

*Businesses identified as DBEs on this form must be registered as a Disadvantaged Business Enterprise in the state where the work is to be performed and included in the state's DBE Business Directory.

****A copy of the firm's DBE certification is required as part of the bid package submission.**

**DISADVANTAGED BUSINESS ENTERPRISE (DBE)/
SMALL BUSINESS (SB) LETTER OF INTENT
(FOR FEDERALLY-SPONSORED PROJECTS)**

AIRPORT: _____ AIP/ASMP NO.: _____

PROJECT TITLE: _____

Name of Prime Contractor

Name of DBE/SB Contractor

Address

City State Zip Code Phone

1. The Undersigned DBE firm intends to perform work in connection with the above referenced project as:

☐ An Individual

☐ A Partnership

☐ A Corporation

☐ A joint venture with: _____

☐ Other: _____

2. The undersigned affirms that they are a duly authorized official representing the proposed DBE and affirms that its certification has not expired nor been revoked. (Attach a copy of the certification letter)

Check all that apply:

☐ DBE

☐ Small Business

Certification Agency: _____ Certification Number: _____

States with DBE Certification*: (Leave Blank if not a DBE)	Age of Firm: _____ Years	
	Employees: # _____	
Annual Gross Receipts:	<input type="checkbox"/> <\$1,000,000	<input type="checkbox"/> \$1,000,000 - \$3,000,000
	<input type="checkbox"/> \$3,000,000 - \$6,000,000	<input type="checkbox"/> \$6,000,000 - \$10,000,000
	<input type="checkbox"/> \$10,000,000 - \$20,000,000	<input type="checkbox"/> >\$20,000,000
DBE Disadvantaged Group Information (DBE/Part 26 Uniform Reporting Requirement)		
Ethnicity (Check One):	<input type="checkbox"/> Black American	<input type="checkbox"/> Asian-Pacific American
	<input type="checkbox"/> Hispanic American	<input type="checkbox"/> Subcontinent Asian American
	<input type="checkbox"/> Native American	<input type="checkbox"/> Non-Minority
Gender (Check One)	<input type="checkbox"/> Male <input type="checkbox"/> Female	Certification: <input type="checkbox"/> Attached**

*Businesses identified on this form **must** be registered as a Disadvantaged Business Enterprise in the state where the work is to be performed and included in the state's DBE Business Directory.

****A copy of the firm's DBE certification is required as part of the bid package submission.**

3. If awarded the contract, the undersigned intends to enter into a subcontract to perform the work described on the following sheet for the prices indicated.

SCHEDULE OF PARTICIPATION

Contract Item No.	Description of Work to be Performed by DBE/ Small Business (SB) Contractor	Estimated Quantity	Unit Price	Item Amount

Total amount credited to DBE/SB contractor (add item amounts): TOTAL \$ _____

Proposed total contract price: \$ _____

The total price to DBE/SB contractor for work performed under this contract is _____ % of the proposed total contract price.

The undersigned certify that they will enter into a formal agreement upon execution of the contract for the above referenced project pursuant to all conditions noted in attached documents, swearing and affirming under the pains and penalties of perjury, that the foregoing information and appropriate attachments are true and accurate to the best of their knowledge.

Name of DBE/SB Contractor: _____

Authorized Signature: _____ Date: _____

Name and Title: _____

Name of Prime Contractor: _____

Authorized Signature: _____ Date: _____

Name and Title: _____

**SUBCONTRACTOR / SUPPLIER
DISADVANTAGED BUSINESS ENTERPRISE (DBE*)
EXPENDITURE REPORT**

(To be filled out by the Prime Contractor and the Subcontractor / Supplier and submitted with each Periodic Cost Estimate)

Project Name: _____

Airport: _____

AIP Number: _____

Prime Contractor

Company Name: _____

Subcontractor / Supplier Contractor

Company Name: _____

DBE Status:	<input type="checkbox"/> Non-DBE	<input type="checkbox"/> Certified DBE	(Check one)
-------------	----------------------------------	--	-------------

Contract Item No.	Description of Work to be Performed by Subcontractor / Supplier	Estimated Quantity	Unit Price	Item Subtotal
Total Amount requested by Subcontractor / Supplier this Invoice:				
Total amount previously requested by Subcontractor / Supplier:				
Total amount requested by Subcontractor / Supplier to date:				

(Attached additional sheets if needed)

*Businesses identified as DBEs on this form must be registered as a Disadvantaged Business Enterprise in the state where the work is to be performed and included in the state's DBE Business Directory.

**SUBCONTRACTOR / SUPPLIER
DISADVANTAGED BUSINESS ENTERPRISE (DBE*)
EXPENDITURE REPORT**

The undersigned certifies that the Subcontractor / Supplier has successfully completed the above referenced work associated with this project and further assures that the Subcontractor / Supplier will be paid in full for the amount indicated on page 1 for said services in accordance with the Contract Documents.

NAME OF SUBCONTRACTOR / SUPPLIER: _____

AUTHORIZED SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

NAME OF PRIME CONTRACTOR: _____

AUTHORIZED SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

Note: If the Prime Contractor is a DBE, the Prime Contractor should fill out and submit a copy of this form listing themselves as the Prime Contractor and the Subcontractor / Supplier.

*All businesses identified on this form **must** be registered as Disadvantaged Business Enterprises in the state where the work is to be performed and included in the state's DBE directory.

PRIME CONTRACTOR DBE* ANNUAL REPORT FORM

(To be filled out by the Prime Contractor and submitted no later than November 1st of each calendar year or prior to the approval of final Periodic Cost Estimate.)

The reporting period is from October 1st of the previous year through September 30th of the current year.

Project Name: _____

Airport: _____

AIP Number: _____

Date: _____

Prime Contractor

Company Name: _____

Payments Made this Period (Ongoing Contracts)

PAYMENTS MADE ON ONGOING CONTRACTS	Total Number of Contracts**	Total Dollars Paid	Total Number of Contracts with DBEs	Total Payments to DBE Firms	Total Number of DBE Firms Paid

Payments Made this Period (Completed Contracts)

PAYMENTS ON CONTRACTS COMPLETED THIS PERIOD	Number of Contracts* Completed	Total Dollar Value of Prime Contracts Completed	Total DBE Participation (Dollars)

**For the purposes of this Form, a Contract refers to any agreement for services / supplies with a Subconsultant / Supplier, regardless of DBE status.

AUTHORIZED SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

*Businesses identified as DBEs on this form must be registered as a Disadvantaged Business Enterprise in the state where the work is to be performed and included in the state's DBE Business Directory.

BIDDERS LIST COLLECTION FORM

The information below must be submitted for every bidder who submits a quote/bid to the recipient and every potential subcontractor who submitted a quote/bid to each bidder. §26.11(c) requires collection of information from all bidders and subcontractors, including unsuccessful ones.

Firm Name	Address	DBE/ Non-DBE*	NAICS Code(s)	Race and Gender of the Firm's Majority Owner		Age of Firm	Annual Gross Receipts
				<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Black American <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Asian-Pacific American <input type="checkbox"/> Subcontinent Asian American <input type="checkbox"/> Non-Minority	<input type="checkbox"/> Less than 1 year <input type="checkbox"/> 1- 3 years <input type="checkbox"/> 4-7 years <input type="checkbox"/> 8-10 years <input type="checkbox"/> More than 10 years	<input type="checkbox"/> Less than \$1 million <input type="checkbox"/> \$1-3 million <input type="checkbox"/> \$3-6 million <input type="checkbox"/> \$6-10 million <input type="checkbox"/> \$10-20 million <input type="checkbox"/> Greater than \$20 million
				<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Black American <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Asian-Pacific American <input type="checkbox"/> Subcontinent Asian American <input type="checkbox"/> Non-Minority	<input type="checkbox"/> Less than 1 year <input type="checkbox"/> 1- 3 years <input type="checkbox"/> 4-7 years <input type="checkbox"/> 8-10 years <input type="checkbox"/> More than 10 years	<input type="checkbox"/> Less than \$1 million <input type="checkbox"/> \$1-3 million <input type="checkbox"/> \$3-6 million <input type="checkbox"/> \$6-10 million <input type="checkbox"/> \$10-20 million <input type="checkbox"/> Greater than \$20 million
				<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Black American <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Asian-Pacific American <input type="checkbox"/> Subcontinent Asian American <input type="checkbox"/> Non-Minority	<input type="checkbox"/> Less than 1 year <input type="checkbox"/> 1- 3 years <input type="checkbox"/> 4-7 years <input type="checkbox"/> 8-10 years <input type="checkbox"/> More than 10 years	<input type="checkbox"/> Less than \$1 million <input type="checkbox"/> \$1-3 million <input type="checkbox"/> \$3-6 million <input type="checkbox"/> \$6-10 million <input type="checkbox"/> \$10-20 million <input type="checkbox"/> Greater than \$20 million
				<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Black American <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Asian-Pacific American <input type="checkbox"/> Subcontinent Asian American <input type="checkbox"/> Non-Minority	<input type="checkbox"/> Less than 1 year <input type="checkbox"/> 1- 3 years <input type="checkbox"/> 4-7 years <input type="checkbox"/> 8-10 years <input type="checkbox"/> More than 10 years	<input type="checkbox"/> Less than \$1 million <input type="checkbox"/> \$1-3 million <input type="checkbox"/> \$3-6 million <input type="checkbox"/> \$6-10 million <input type="checkbox"/> \$10-20 million <input type="checkbox"/> Greater than \$20 million

*Businesses identified as DBEs on this form **must** be registered as a Disadvantaged Business Enterprise in the state where the work is to be performed and included in the state's DBE Business Directory. Attach duplicate forms if necessary.

CONTRACTOR / SUBCONTRACTOR / SUPPLIER
BUY AMERICAN CERTIFICATION
(Attach to all Shop Drawing Submittals)
Page 1 of 2

Job Name: _____

AIP No.: _____ Gale Associates Job No. _____

Contractor / Subcontractor / Supplier: _____

Address: _____

Contact: _____ Phone Number: _____

Reviewed By: _____ Date Submitted: _____

Item No.: _____

Specification Section and Paragraph: _____

Description: _____

The undersigned certifies that (check the item that applies):

1. The above referenced products or materials are wholly produced in the United States of America (US) of US produced materials.
2. A waiver for the use of non-US produced products or production outside of the US has been granted by the FAA for this product or material and a copy of the waiver is attached.
3. All the above referenced products or materials being used on the project are on the Nationwide Buy American conformance list located at (attach copy of list):
http://www.faa.gov/airports/aip/procurement/federal_contract_provisions/
4. A waiver for the use of non-US produced products or production outside of the US is being requested as part of this submission (see FAA Program Guidance Letter 10-02 in the Federal Contract Provisions section of the Supplemental General Provisions for guidance on waiver types and requirements).

CONTRACTOR / SUBCONTRACTOR / SUPPLIER
BUY AMERICAN CERTIFICATION
Page 2 of 2

Dated at _____ this _____ day of _____, _____.
(Location Signed) (Day) (Month) (Year)

Name of Bidder: _____ (print name)

By: _____ (signature)

Title: _____ (print title)

CONTRACTOR SUBMITTAL FORM (CONTRACTOR)

Job Name: _____

AIP No.: _____

Gale Associates Job No. _____

Contractor: _____

Address: _____

Contractor's Contact: _____ Phone Number: _____

Reviewed By: _____ Date Submitted: _____

☐ Check here if submittal is from a Subcontractor

Item No.: _____

Specification Section and Paragraph: _____

CERTIFICATION

I HEREBY CERTIFY that the attached submittal has been received under the terms of the Contract Documents and is in conformity with the requirements of the Plans and Specifications unless specifically noted otherwise. It is understood that the Contractor is responsible for dimensions and quantities to be confirmed and corrected at the site, for information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction, and for coordination of the Work of all trades.

- ☐ 1- Submitted as specified with Buy-American
- ☐ 2- Submitted "AS EQUAL" to the product specified with Buy-American
- ☐ 3- Submitted "IN SUBSTITUTION" to the product specified with Buy-American
- ☐ 4- Subcontractor submittal form included
- ☐ 5- Buy-American (Form BA-20)
- ☐ 6- Other

Description of Submittal Components: _____

Submittal will not be approved without an acceptable Gale Form BA-20 "Contractor / Subcontractor / Supplier Buy American Certification."

(For additional comments attach and number additional pages)

SUBCONTRACTOR SUBMITTAL FORM (CONTRACTOR)

Job Name: _____

AIP No.: _____

Gale Associates Job No. _____

Subcontractor: _____

Address: _____

Subcontractor's Contact: _____ Phone Number: _____

Reviewed By: _____ Date Submitted: _____

☐ Check here if submittal is from a Subcontractor

Item No.: _____

Specification Section and Paragraph: _____

CERTIFICATION

I HEREBY CERTIFY that the attached submittal has been received under the terms of the Contract Documents and is in conformity with the requirements of the Plans and Specifications unless specifically noted otherwise. It is understood that the Contractor is responsible for dimensions and quantities to be confirmed and corrected at the site, for information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction, and for coordination of the Work of all trades.

- ☐ 1- Submitted as specified with Buy-American
- ☐ 2- Submitted "AS EQUAL" to the product specified with Buy-American
- ☐ 3- Submitted "IN SUBSTITUTION" to the product specified with Buy-American
- ☐ 4- Subcontractor submittal form included
- ☐ 5- Buy-American (Form BA-20)
- ☐ 6- Other

Description of Submittal Components: _____

**Submittal will not be approved without an acceptable Gale Form BA-20 "Contractor /
Subcontractor / Supplier Buy American Certification."**

(For additional comments attach and number additional pages)

U.S. Department of
Transportation**DBE Regular Dealer/Distributor
Affirmation Form**

Bidder Name:

Contract Name/Number:

Sections 26.53(c)(1) of Title 49 Code of Federal Regulations requires recipients to make a preliminary counting determination for each DBE listed as a regular dealer or distributor to assess its eligibility for 60 or 40 percent credit, respectively, of the cost of materials and supplies based on its demonstrated capacity and intent to perform as a regular dealer or distributor, as defined in section 26.55(e)(2)(iv)(A),(B),(C), and (3) under the contract at issue. The regulation requires the recipient's preliminary determination to be made based on the DBE's written responses to relevant questions and its affirmation that its subsequent performance of a commercially useful function will be consistent with the preliminary counting of such participation. The U.S. Department of Transportation is providing this form as a tool for recipients, prime contractors, regular dealers, and distributors to use to carry out their respective responsibilities under this regulation. The form may be used by each DBE supplier whose participation is submitted by a bidder for regular dealer or distributor credit on a federally-assisted contract with a DBE participation goal. The form may also be used by prime contractors in connection with DBE regular dealer or distributor participation submitted after a contract has been awarded provided such participation is subject to the recipient's prior evaluation and approval. If this form is used, it should be accompanied by the bidder's commitment, contract, or purchase order showing the materials the DBE regular dealer or distributor is supplying. Use of this tool is not mandatory. If a recipient chooses a different method for complying with Section 26.53(c)(1), it must include that method in its DBE Program Plan.

DISCLAIMER: This form has not yet received OMB/PRA approval and is subject to change. We are making it available for your voluntary use.

DBE Name:	Total Subcontract/Purchase Order Amount:
Authorized DBE Representative (Name and Title):	NAICS Code(s) Related to the Items to be Sold/Leased:

1. Will **all** items sold or leased be provided from the on-hand inventory at your establishment? ☐ YES ☐ NO

(If "YES," you have indicated that your performance will satisfy the regular dealer requirements and may be counted at 60%. **STOP here. Read and sign the affirmation below.** If "NO" Continue.)

- a) Are you selling bulk items (e.g., petroleum products, steel, concrete, concrete products, sand, gravel, asphalt, etc.) or items not typically stocked due to their unique characteristics (aka specialty items)? ☐ YES ☐ NO (If "YES," Go to Question 2. If "NO" Continue.)
- b) Will at least 51% of the items you are selling be provided from the inventory maintained at your establishment, and will the minor quantities of items delivered from and by other sources be of the general character as those provided from your inventory? ☐ YES ☐ NO* (If "YES," you have indicated that your performance will satisfy the regular dealer requirements and may be counted at 60%. **STOP here. Read and sign the affirmation below.**

* If 1., 1.a), and 1. b) above are "NO," your performance on the whole will not satisfy the regular dealer requirements; therefore, only the value of items to be sold or leased from inventory can be counted at 60%. (Go to Question 3. to determine if the items delivered from and by other sources are eligible for Distributor credit.)

2. Will you deliver all bulk or specialty items using distribution equipment you own (or under a long-term lease) and operate? ☐ YES ☐ NO¹

(If "YES," you have indicated that your performance will satisfy the requirements for a regular dealer of bulk items and may be counted at 60%. **STOP here. Read and sign the affirmation below.**)

¹ If "NO," your performance will not satisfy the requirements for a regular dealer of bulk items; the value of items to be sold or leased cannot be counted at 60%. (Go to Question 3.)

3. Will the written terms of your purchase order or bill of lading from a third party transfer responsibility, including risk for loss or damage, to your company at the point of origin (e.g. a manufacture's facility)? ☐ YES² ☐ NO³

- a) Will you be using sources **other than** the manufacturer (or other seller) to deliver or arrange delivery of the items sold or leased? ☐ YES² ☐ NO³

² If your responses to 3 and 3.a) are "YES," you have indicated that your performance will satisfy the requirements of a distributor; therefore, the value of items sold or leased **may** be counted at 40%.

³ If you responded "NO" to either 3 or 3.a), counting of your participation is limited to the reasonable cost of fees or commissions charged, including transportation charges for the delivery of materials or supplies; the cost of materials or supplies may not be counted.

I affirm that the information that I provided above is true and correct and that my company's subsequent performance of a commercially useful function will be consistent with the above responses. I further affirm that my company will independently negotiate price, order specified quantities, and pay for the items listed in the bidder's commitment. This includes my company's responsibility for the quality of such items in terms of necessary repairs, exchanges, or processing of any warranty claims for damaged or defective materials.

Printed Name and Signature of DBE Owner/Authorized Representative:

The bidder acknowledges its responsibility for verifying the information provided by the DBE named above and ensuring that the counting of the DBE's participation is accurate. Any shortfall caused by errors in counting are the responsibility of the bidder.

Printed Name and Signature of Bidder's Authorized Representative:



Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbitts-Nutt, Secretary & CEO
Denise Garcia, Acting Administrator



**Letter of Intent/Schedule of Participation¹
Disadvantaged Business Enterprise (DBE)² Participation
(For Federally-sponsored Projects)³**

MassDOT Aeronautics Division Form AD3-DBE (Last Modified: September 20, 2024)

NOTE TO BIDDER: THE DBE GOAL FOR THIS PROJECT SHALL NOT BE LESS THAN _____ % (FROM SPONSOR'S APPROVED DBE PLAN). IF THIS GOAL IS NOT MET, THE BIDDER MUST SUBMIT DOCUMENTATION OF A "GOOD FAITH EFFORT" TO THE SPONSOR. PLEASE REFER TO CONTRACT DOCUMENTS REGARDING WHEN THIS FORM NEEDS TO BE SUBMITTED.

AIRPORT: _____ **AIP NO.:** _____

PROJECT TITLE: _____

Name of General Contractor

Name of DBE Contractor

Address

City

State

Zip Code

Phone

1. The undersigned DBE firm intends to perform work in connection with the above referenced project as:

Check One:

- ☐ An individual ☐ A partnership ☐ A corporation
☐ A joint venture with: _____
☐ Other _____

Attach extra sheets if necessary

2. The undersigned affirms that they are a duly authorized official representing the proposed DBE and affirms that its certification has not expired nor been revoked. (Attach a copy of the certification letter)⁴

Check all that apply:

☐ DBE

Certification Agency _____

Certification Number _____

3. If awarded the contract, the undersigned intends to enter into a subcontract to perform the work described on the following sheet for the prices indicated.

¹ Use a separate form for each DBE firm to be utilized on this project.

² Must be register with the MA Supplier Diversity Office (SDO) and must be listed as a DBE with a valid certification when work is completed. Suppliers must be discounted at 60%. The participation of the Prime Contractors and Subcontractors that are DBEs may be counted toward the DBE goal.

³ For projects with any amount of federal participation.

⁴ Certification of DBE must be completed prior to Contract Award.



Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbitts-Nutt, Secretary & CEO
Denise Garcia, Acting Administrator



Contract Item No.	Description of Work to be Performed by DBE Contractor	Estimated Quantity	Unit Price	Item Amount

Total amount credited to DBE contractor (add item amounts): TOTAL \$ _____

Proposed total contract price: \$ _____

The total price to DBE contractor for work performed under this contract is _____ % of the proposed total contract price. (See note to bidder above).

The undersigned certify that they will enter into a formal agreement upon execution of the contract for the above referenced project pursuant to all conditions noted in attached documents, swearing and affirming under the pains and penalties of perjury, that the foregoing information and appropriate attachments are true and accurate to the best of their knowledge.

Name of DBE Contractor: _____

Authorized Signature: _____

Name and Title: _____

Date: _____

Name of Prime Contractor: _____

Authorized Signature: _____

Name and Title: _____

Date: _____



Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary & CEO
Denise Garcia, Acting Administrator



**Project Expenditure Report¹
Disadvantaged Business Enterprise (DBE)² Participation
(For Federally-sponsored Projects)³**

MassDOT Aeronautics Division Form AD4-DBE (Last Modified: September 20, 2024)

PROJECT TITLE: _____

DBE CONTRACTOR: _____

MASSDOT PAYMENT VOUCHER (PV) NO.: _____ TOTAL DBE CONTRACTOR PARTICIPATION: \$ _____

AIP NO.: _____ PERCENTAGE OF CONTRACT: _____

Contract Item No.	Description of Work to be Performed by DBE Contractor	Estimated Quantity	Unit Price	Item Amount

Total amount requested by DBE contractor this invoice (add item amounts): \$ _____

Total amount previously requested by DBE contractor: \$ _____

Total amount requested by DBE contractor to date: \$ _____

The undersigned certifies that the DBE Contractor has successfully completed the above referenced work associated with this project and further assures that said DBE Contractor will be paid in full for the services indicted above.

Name of Prime Contractor: _____

Authorized Signature: _____

Name and Title: _____

Date: _____

Name of DBE Contractor: _____

Authorized Signature: _____

Name and Title: _____

Date: _____

¹ Form must be submitted with each PV. Separate forms for each DBE contractor.

² Must be register with the MA Supplier Diversity Office (SDO) and must be listed as a DBE with a valid certification when work is completed. Suppliers must be discounted at 60%. The participation of the Prime Contractors and Subcontractors that are DBEs may be counted toward the DBE goal.

³ For projects with any amount of federal participation.

**THE COMMONWEALTH OF MASSACHUSETTS
SUPPLEMENTAL EEO AND ANTI-DISCRIMINATION AND
AFFIRMATIVE ACTION PROGRAM**

CONTRACTOR'S CERTIFICATION

A Contractor will not be eligible for award of a Contract unless such Contractor has submitted the following certification which is deemed a part of the resulting Contract:

CONTRACTOR'S CERTIFICATION

Prime Contractor

Company Name: _____

Certifies that:

1. They intend to use the following listed construction trades in the work under Contract (Attach additional sheets if needed):

2. They will comply with the minority/women workforce ratio and specific affirmative action steps contained in the Massachusetts Supplemental EEO and Anti-Discrimination and Affirmative Action Program; and
3. They will obtain from each of their Subcontractors and submit to the Owner, prior to the award of any Subcontract under this Contract, the Subcontractor's certification required by these Bid conditions (MassDOT Form EEO A-2).

NAME OF PRIME CONTRACTOR: _____

AUTHORIZED SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

**THE COMMONWEALTH OF MASSACHUSETTS
SUPPLEMENTAL EEO AND ANTI-DISCRIMINATION AND
AFFIRMATIVE ACTION PROGRAM**

SUBCONTRACTOR'S CERTIFICATION

Prior to the award of any Subcontract, regardless of tier, the prospective Subcontractor must execute and submit to the Prime Contractor the following certification, which will be deemed a part of the resulting Subcontract:

SUBCONTRACTOR'S CERTIFICATION

Subcontractor

Company Name: _____

Certifies that:

1. They intend to use the following listed construction trades in the work under Contract (Attach additional sheets if needed):

2. They will comply with the minority/women workforce ratio and specific affirmative action steps contained in the Massachusetts Supplemental EEO and Anti-Discrimination and Affirmative Action Program; and
3. They will obtain from each of their Subcontractors and submit to the Owner, prior to the award of any Subcontract under this Contract, the Subcontractor's certification required by these Bid conditions (MassDOT Form EEO A-2).

NAME OF PRIME SUBCONTRACTOR: _____

AUTHORIZED SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE ORDER 481 - CONTRACTOR CERTIFICATION
PROHIBITING THE USE OF UNDOCUMENTED WORKERS ON STATE CONTRACTS

Issued March

2007



CONTRACTOR LEGAL NAME:
CONTRACTOR VENDOR/CUSTOMER CODE:

INSTRUCTIONS:

Executive Order 481 applies to all state agencies in the Executive Branch, including all executive offices, boards, commissions, agencies, departments, divisions, councils, bureaus, and offices, now existing and hereafter established. As it is the policy of the Executive Branch to prohibit the use of undocumented workers in connection with the performance of state contracts, all contracts entered into after February 23, 2007 require that contractors, as a condition of receiving Commonwealth funds under any Executive Branch contract, make the following certification:

CONTRACTOR CERTIFICATION:

As evidenced by the signature of the Contractor's Authorized Signatory below, the Contractor certifies under the pains and penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of all Executive Branch contracts; that pursuant to federal requirements, the Contractor shall verify the immigration status of all workers assigned to such contracts without engaging in unlawful discrimination; and that the Contractor shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker(s). The Contractor understands and agrees that breach of any of these terms during the period of each contract may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

Contractor Authorizing Signature

Date: _____

Print Name

Title: _____ Telephone: _____

Fax: _____ Email: _____

The Contractor is required to sign this Certification only once and may provide a copy of the signed Certification for any contract executed with an Executive Branch Department. A copy of this signed Certification must be attached to the "record copy" of all contracts with this Contractor that are filed with the contracting Department.

TECHNICAL SPECIFICATIONS

ITEM M-001 SUMMARY OF WORK AND SPECIAL WORK REQUIREMENTS**CONTRACT DOCUMENTS**

001-0.1 This section of these Specifications is a part of the Contract Documents as defined in the General Provisions. All applicable parts of the balance of the Contract Documents are equally as binding for this as for all other sections. If two documents conflict, the stricter of the documents shall govern.

001-1.1 GENERAL. The special requirements set forth in this section of these Specifications shall govern any aspect of the Contract work where such requirements are deemed applicable by the Sponsor or the Engineer. The purpose of these requirements is to ensure that the Contract work does not damage private property or create any hazard to aircraft operations, and to point out special coordination or schedule conditions of which the Contractor should be aware. It shall be the Contractor's responsibility to conduct all work in strict accordance with the special requirements set forth herein and to fully cooperate with the Sponsor, herein called the Airport Operator, and the Engineer in every way necessary to fulfill the purposes of these requirements as set forth above.

The Contractor shall comply with all the requirements of the Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5370-2G, *Operational Safety on Airports During Construction* and the requirements specified herein. In areas of conflict the more conservative safety requirement shall govern.

For the purposes of this project, the Sponsor and the Airport Operator are both the Town of Mansfield Airport Commission, Town of Mansfield, Massachusetts. The Airport Operations Coordinator is Mr. Kevin Bullock, Airport Manager, or another person designated by the Sponsor.

001-2.1 DESCRIPTION. This project is to reconstruct, mark, light, and sign Runway 14-32, parallel Taxiway 'A', and stub Taxiways 'A1', 'A2', 'A3', and 'D', as well as to install a new electrical vault at the Mansfield Municipal Airport and install NAVAIDs (REILs, PAPIs, and Primary Wind Cone). Work on the project will include the following:

- Removal of existing pavement and base materials;
- Removal of existing cables, ducts, airport vault, grounding, junction cans, NAVAIDs, primary wind cone, and markers;
- Removal of existing drainage pipe and structures;
- Excavation and grading;
- Installation and maintenance of sedimentation and erosion controls
- Installation of new drainage pipes and structures;
- Installation of a new airfield electrical vault, ducts, cables, lighting, signage, primary wind cone, and NAVAIDs (REILs and PAPIs)
- Construction of new runway and taxiway pavement boxes;
- Construction of new airport bituminous asphalt pavement;
- Topsoil and seed;
- Installation of pavement markings; and

- Other work as shown on the Plans, as specified in the Specifications, and as directed by the Engineer.

The construction of this project shall be in strict conformance with the Federal, State, and Local permitting (Town of Mansfield, Massachusetts and Town of Norton, Massachusetts) requirements.

001-2.2 BASE BID. The project is being bid with a Base Bid. The Base Bid includes, but is not limited to, all work within the Phase I work area, as shown on the Plans or as directed by the Engineer.

001-2.3 WORK AREAS. To minimize potential disturbance to Airport operations, this project has been combined into one (1) phase (see Drawing No. S1.1 of the Plans). The project phasing and work areas must be constructed in order. Any changes to the phasing or work areas are subject to the approval of the Airport Operations Coordinator. The work areas are as follows:

Phase I Base Bid Work Area (Drawing No. S1.1) - Work to be performed includes, but is not limited to, installation of barricades, orange construction fence, and runway closure markers; installation of erosion and sediment control devices, removal of existing pavement and base materials; removal of existing cables, ducts, airport vault, grounding, NAVAIDs, primary wind cone, junction cans, and markers; excavation and grading; installation of new drainage pipes and structures; installation of a new airfield electrical vault, ducts, cables, lighting, signage, primary wind cone, and NAVAIDs (REILs and PAPIs); construction of new runway and taxiway pavement boxes; construction of new airport bituminous asphalt pavement; topsoil and seed; installation of pavement markings; and other work as shown on the Plans, contained within the Specifications, or as directed by the Engineer.

Work within this phase is located within the Runway Safety Area and will require a full closure of Runway 14-32, Runway 4-22, parallel Taxiway 'A', and stub taxiways. All operational impacts (closures) shall be coordinated, in writing, with the Airport at least fourteen (14) calendar days prior to the start of construction in the Phase I work area.

For additional requirements for the Phase I Work Area, refer to section 001-2.4 Work Area Requirements.

001-2.4 WORK AREA REQUIREMENTS. The following is a general outline of the work area requirements. The work area requirements are not intended to describe every work element or every detail of work, rather they are intended to provide the Contractor with an outline of Airport operational requirements during the project. The Contractor shall propose the actual sequencing of the work in all work areas subject to the conditions specified below for review and approval by the Airport, the Engineer, MassDOT Aeronautics, and the FAA. All work shall be completed within the specified Contract Time. The Contractor shall refer to the referenced Federal Aviation Administration (FAA) Advisory Circulars (AC), Plans, and related Specifications for specific work requirements.

General – The Contractor will be required to coordinate construction activities on a daily basis with the Airport Operator and the Engineer. If requested, the Contractor shall make any reasonably requested adjustment to the construction schedule and/or construction sequence to avoid interference with Airport operations and other safety concerns.

Prior to working in any work areas, the Contractor shall review and understand the boundaries of the existing Runway Safety Area (RSA), Runway Obstacle Free Zone (OFZ), Taxiway Object Free Area (TOFA), Taxiway Safety Area (TSA), Taxilane Object Free Area (TLOFA) and other restricted work locations and surfaces. The Contractor shall confirm that

proper NOTAMS have been issued and that all required safety precautions have been implemented before working in any areas. Details of restricted construction areas can be found in the Contract Plans.

The Contractor shall note the location of staging areas, vehicle parking areas and haul routes as indicated on the Plans or as directed by the Engineer. The Contractor access shall be limited to the work area(s), staging area(s), vehicle parking areas and haul routes shown on the Plans. The Contractor shall mark out the boundaries of work area(s), haul routes, vehicle parking areas and staging areas in order for these areas to be easily identified by its employees, Subcontractors, Vendors, and Suppliers.

Prior to Construction work that may impact the protected surfaces of the Airport, the Engineer shall file a FAA Form 7460-1 for the proposed work. FAA Form 7460-1 will request the FAA to determine if construction activities will be a hazard to aircraft and specify needed restrictions (such as lighting or marking equipment). The form can be filed online at <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>. Separate forms will need to be filed each time a crane or other equipment will potentially penetrate protected surfaces. Forms should be filed **at least three (3) months prior to the anticipated date of the activity**.

The project will require that the Airport issue a Notice To Airmen (NOTAM(s)) whenever construction activities may impact aircraft operations. The Contractor shall coordinate with the Airport Operator and Engineer and confirm that proper NOTAM(s) have been issued (<https://pilotweb.nas.faa.gov/PilotWeb/> and enter 1B9 in the "Locations" box) and all other safety precautions have been implemented.

While working within the work area, no stockpiles shall penetrate Restricted Construction Areas, 14 CFR FAR Part 77 surfaces, or Threshold Siting Surfaces. Stockpile heights shall be limited to 25 feet or less.

The Airport Operator reserves the right to require the Contractor to install and maintain any reasonable protective measures in the interest of Airport safety.

Phase I Work Area. The Contractor shall complete all work within the Phase I work area within **ninety (90) calendar days**. Phase I work will require the temporary closure of Runway 14-32, Runway 4-22, parallel Taxiway 'A', and stub taxiways. The Contractor shall give advance notice, at least fourteen (14) calendar days, of his/her intention to work in the Phase I work area so that the Airport can issue the proper NOTAMs to alert Airport users of potential impacts to operations.

The Contractor shall take the necessary precautions to protect existing structures, pavements, cables, and wires while performing the work.

001-2.5 EXISTING CONDITIONS. Prior to bidding, the Contractor shall be responsible for fully examining the Plans, Specifications, and existing field conditions, and shall fully understand all project requirements and obligations. Bidders are encouraged to examine the work areas prior to bidding to familiarize themselves with the existing site conditions. All requests for access shall be made by contacting the Engineer.

001-2.6 WETLANDS. Disturbance of wetlands is a potential violation of Federal, State, and Local regulations. Disturbance of wetlands or wetland buffers outside the limits of work as shown on the Plans is not permitted. The Contractor shall take precautions to avoid any disturbance of wetlands and wetland buffers as part of the work.

The Contractor shall pay all fines assessed against the Airport and related expenses due to non-compliance with the permits, laws, rules, and regulations cited in the Contract Documents and caused by the Contractor and any personnel, Subcontractors, and Vendors.

001-2.7 IMPACT TO THE AIRPORT. This project may have impacts to operations at the Airport. To minimize potential impact, it will be necessary to sequence construction in accordance with the Plans and Specifications.

001-2.8 COORDINATION OF WORK WITH THE AIRPORT AND OTHER CONTRACTORS. All work required for this project shall be coordinated with the Engineer and the Sponsor on a daily basis. The Sponsor reserves the right to contract for and perform other or additional work on or near the work covered by this Contract.

When separate Contractors are let within the limits of any one (1) project, each Contractor shall conduct work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working within the same project area shall cooperate with each other as directed. Where necessary, each Contractor shall make reasonable adjustments to his/her schedules to allow for the proper sequencing of work by others.

The Contractor shall arrange the work and shall place and dispose of the materials being used or stored for later use so as not to interfere with the operations of the other Contractors. Contractors utilizing haul roads shall share in the responsibility of maintenance, dust control, and restoration of the haul roads. The responsibilities shall be pro-rated to each Contractor based on use. In areas of dispute between Contractors regarding responsibilities for maintenance, dust control, and restoration of the haul roads or other items, the Engineer shall have the sole judgment as to the assessment of responsibilities to each respective Contractor.

001-2.9 MATERIALS TO BE RETAINED BY SPONSOR. The Contractor shall coordinate with the Engineer to confirm which materials (slated to be removed) will be retained by the SPONSOR (Airport). The Contractor shall take extreme care when removing materials designated to be retained by the SPONSOR. Place and stabilize all materials. If any pipes, structures, or other manufactured products are scheduled to be retained by the SPONSOR, the Contractor shall neatly palletize them and deliver them to the appropriate location on the Airport.

001-3.1 PROJECT DURATION. Upon execution of the Contract, the Airport Operator will issue a written "Notice to Proceed", which will specify an effective date for the Contractor to begin work at the site. **All work under this Contract must be completed within ninety (90) calendar days** of the date specified in the "Notice to Proceed" for the award of the project. This includes placement of final pavement markings. The flight check will not be counted towards the day count.

The Contractor shall also be required to complete all interim Work Area work within the calendar days and dates provided above. This shall include:

- **Phase I Work Area** **Within Ninety (90) Calendar Days**

Upon written request, and with the approval of the Airport Operator and the Engineer, the calendar days shown above need not be consecutive as long as the conditions outlined in Section 001-2.4 are met, aircraft operation areas and vehicular access points are open, aircraft operation is not affected by the temporary stoppage in the Contract Time, and the interim completion and final completion dates are not affected. It shall be understood that it is the Contractor's responsibility to request a stoppage of Contract Time in writing. Further, it is understood that if it is determined to be in the best interest of the Airport Operator and the Airport, the request for a Contract Time stoppage can and will be denied. During a Contract Time stoppage, no work may commence (with the exception of the

maintenance of erosion and sedimentation controls and other temporary site measures as required) until a request is made to resume work and Contract Time. If work is performed without an official restart of the Contract Time, it is agreed that the work performed is at the Contractor's expense and is not eligible for measurement or payment. It shall be understood that it is the Contractor's responsibility to request a resumption of Contract Time in writing, a minimum of forty-eight (48) hours prior to the resumption of work.

It shall be clearly understood that the Contract Time is contractual and if the time is exceeded, liquidated damages may be assessed by the Airport Operator as listed in Section 001-5.1 of this Specification. Requests for additional Contract Time will only be granted under the following conditions:

- Weather conditions outside of what is considered 'normal' that prohibit work as required under Section 001-2.3;
- Additional work authorized by change order;
- Delays or postponements of critical path work as per the approved construction schedule as requested by the Airport Operator; or
- Material delivery delays that are documented and beyond the Contractor's control. Material delivery delays that are not documented, not accounted for or identified in the Contractor's schedule, or are the fault of the Contractor, will not be considered a valid justification to extend the Contract Time.

001-3.2 SEQUENCE OF WORK. The Contractor will have the option as to the actual sequencing of the work in each of the work areas, meeting the work area requirements provided within this Specification.

The proposed sequencing shall be incorporated into the overall project schedule, which is to be submitted to the Engineer and Airport Operator for review prior to the pre-construction meeting. If requested, the Contractor shall make adjustments in the proposed sequence of work to minimize the impact to Airport operations and safety.

Key components in sequencing the work include, but are not limited to:

- Work Area requirements, conditions and restrictions are adhered to;
- The Safety Plan is fully implemented;
- FAA Form 7460-1s are filed;
- Minimizing impacts to aircraft aprons.

Upon receipt of the "Notice to Proceed", the Contractor should proceed with the field verification related to the project in all work areas.

The Contractor shall notify the Engineer at least seventy-two (72) hours prior to the time when the Contractor is ready to start work. Upon approval of the Airport Operator through the Engineer, the time periods allowed for the work shall begin. Prior to commencing work, the Contractor shall verify that the proper NOTAMS have been posted and ensure that sufficient barricades and other safety measures have been placed as shown on the Plans, required by FAA Advisory Circulars or as directed by the Engineer. All adjustments to the scheduling of work within all Work Areas must be coordinated with the Airport Operator, through the Engineer, at least seventy-two (72) hours prior to the start of work.

001-3.3 CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) AND SAFETY PLAN COMPLIANCE DOCUMENT (SPCD). This project requires that a Construction Safety and Phasing Plan (CSPP) is

prepared in accordance with FAA requirements. This plan is a stand-alone document that is required by the FAA on federally assisted Airport Improvement Program (AIP) projects. The requirements of the CSPP have been included within project Plans and within the project Specifications. A copy of the stand-alone safety plan will be given to the Contractor. Any revisions to the CSPP must be submitted in writing to the Engineer, for approval by FAA, MassDOT Aeronautics, and the SPONSOR. FAA approvals take a minimum of forty-five (45) working days.

The Contractor has a contractual obligation to follow the CSPP and to provide a Safety Plan Compliance Document (SPCD). The SPCD will detail how the requirements of the CSPP will be implemented. Within the SPCD, the Contractor shall provide details including but not limited to, contact names and numbers, the type of barricades proposed, haul routes to work areas, communication plan, fueling of equipment, FOD and dust control, verification of height restriction on stockpiles and equipment, and other and other safety procedures. Approval of the SPCD by the Airport Operator will be required prior to the issuance of the Notice to Proceed.

To facilitate the use of tall equipment and/or cranes, the Engineer shall submit an FAA Form 7460-1. FAA Form 7460-1 will request the FAA to determine if construction activities will be a hazard to aircraft and specify needed restrictions (such as lighting or marking equipment). The form can be filed online at <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>. The Contractor shall be responsible for following the FAA determination and the requirements for markings and lighting of the tall equipment and/or cranes.

001-4.1 SUBMITTALS. Upon receipt of the Notice of Award of the Contract, the Contractor shall submit all appropriate shop drawings, material certifications and equipment data sheets in accordance with relevant sections of these Specifications. Once approvals have been obtained, the Contractor shall order all necessary equipment and materials and shall notify the Engineer of their receipt. The contractor shall provide Buy-American certifications for all materials used on this project during the submittal process. Submittals without the Buy-American certificate will be immediately rejected and returned to the Contractor for resubmission. The Contractor shall use form BA-20 in Section VIII (Forms) of the Supplemental General Provisions.

In addition, the Contractor shall identify all long lead-time material items and incorporate them into the construction schedule. The Contractor is reminded to include sufficient time for material shop drawing review in this schedule. In general, submittals requiring in-office review only will be turned around within ten (10) business days. Submittals requiring outside review can take up to twenty (20) business days. It shall be the Contractor's responsibility to identify long lead-time material items and incorporate their delivery into the overall work schedule.

No additional Contract Time will be provided for failure to identify long lead-time materials.

Within ten (10) days of the Notice of Award being issued by the Sponsor, the Contractor shall submit a Submittal Log for the project that includes all the submittals, Certificates of Compliance, and required plans called for on the Plans and in the Specifications.

The Contractor will be required to utilize the project submittal form contained within Section VIII (Forms) of the Supplemental General Provisions. The Contractor shall be responsible for reviewing all submittals for compliance to the Plans and Specification requirements prior to submission to the Engineer. Failure to use the submittal form will result in submittals being returned as incomplete. The Engineer will provide the Contractor with electronic copies of all required submittal forms upon request.

001-4.2 OVERALL WORK SCHEDULE AND WORK HOURS. The Contractor shall be required to submit a proposed schedule of how work will be accomplished over the Contract period. The schedule shall be prepared using Microsoft Project or similar computer software. The schedule shall indicate detailed tasks with early and late start dates and critical path activities. This overall schedule shall be submitted to the Engineer prior to the Pre-Construction Conference. The Contractor shall be prepared to review the schedule at the Pre-Construction Conference with all parties. If so requested, the Contractor shall make modifications to the schedule to minimize disruption to Airport operations. The overall construction schedule is subject to the approval of the Airport and the Engineer.

It shall be understood that the "Notice to Proceed" will not be provided until the overall work schedule is submitted and determined to be acceptable by the Engineer.

During construction, the overall project schedule shall be updated weekly with copies provided to the Engineer.

Also, in accordance with the General Provisions paragraph 80-02 of section 80, the Contractor shall notify the Engineer at least twenty-four (24) hours in advance of the time when they intend to start work. This is to allow the Sponsor time to issue proper NOTAM(s) of the pending construction activities. The Contractor's daily schedule must be coordinated with the Engineer and the Sponsor.

Work hours available to the Contractor are Monday through Friday 7:00 a.m. to 5:00 p.m. No work is permitted on Saturdays or Sundays. Additional hours may be allowed with the approval of the Sponsor.

001-4.3 MONTHLY, WEEKLY, AND DAILY SCHEDULES REQUIRED. To facilitate the specific requirements and intent of this section, the Contractor shall prepare and submit a weekly schedule of operations for the following workweek. The schedule shall be given to the Engineer by the end of the workweek preceding the week covered by the schedule. The weekly schedule shall be subject to approval by the Engineer, and shall include as a minimum, the following:

1. Major work items to be accomplished.
2. Subcontractors to be on-site.
3. Names of each Contractor's and Subcontractor's personnel to be on-site.
4. Type and quantity of equipment to be on-site.
5. Areas of the site where clearing is scheduled.
6. Any anticipated closing of facilities that will be required, as well as a list of NOTAM(s) required.
7. Other information requested by the Sponsor or Engineer.

A daily schedule of activities to be accomplished that day shall be provided to the Engineer each morning. The daily schedule may be verbal. The Engineer may disallow work that is not included in the current weekly work schedule.

001-4.4 ON-SITE SUPERVISION. The Contractor shall have a competent superintendent(s) on the work site **at all times** that workers of the Contractor and/or Subcontractors are on-site. Procession of work by the prime Contractor, Subcontractors, and or vendors without the Contractor's superintendent on-site will result in an immediate suspension of work by the Sponsor. If a suspension of work order is issued, the Contractor shall secure and maintain the site during the period of the suspension of work. No additional compensation will be considered for work performed in preparation of the suspension of work or maintenance of the site during the suspension. No

additional Contract time or compensation will be considered for delays or work required by the Contractor for failure to have a competent superintendent on-site at all times.

The superintendent(s) shall be fully authorized to act as the Contractor's agent on the project. The superintendent(s) shall be capable of reading and thoroughly understanding the Plans and Specifications and shall receive and fulfill instructions from the Engineer or the Sponsor. The superintendent(s) shall be experienced in the type and nature of the work to be completed.

001-4.5 CONTRACTOR "ON-CALL NAMES AND PHONE NUMBERS". The Contractor shall provide the Engineer and the Airport Manager with the name(s) and telephone number(s) of persons [two (2) minimum] that can be contacted before or after work hours for emergency situations affecting the construction. The Contractor shall be "on call" at all times during the length of the construction period until the end of the Warranty Period as described in the Supplemental General Provisions. The Contractor contact information shall be provided to the Engineer one (1) week prior to the Pre-Construction Conference.

001-4.6 CONTRACTOR MEANS AND METHODS. The Contractor shall provide a report to the Engineer that specifies the means and methods as to how the Contractor intends to undertake the Contract work. This may be included as part of the overall schedule outlined in Specifications Section 001-4.2.

001-5.1 LIQUIDATED DAMAGES. Liquidated Damages may be assessed by the Sponsor if the Contractor does not complete work in the time specified in Section 001-3.1 of the Specifications. Liquidated Damages may be assessed for the completion of all work, for the completion of work within a specific Work Area, and for having a facility closed beyond the hours specified.

The assessment of Liquidated Damages in no way relieves the Contractor from the assessment of Actual Damages, should they occur as a result of the Contractor's actions.

a. Completion of All Work. If any work remains incomplete after the time specified in paragraph 001-3.1 for the **completion of all work**, the Contractor shall pay the Airport Operator as liquidated damages the sum of two thousand dollars (\$2,000) per calendar day for each and every calendar day or portion thereof that the work remains incomplete beyond the above specified time as provided in the General Provisions.

001-6.1 AIRCRAFT OPERATIONS AREAS. The Contractor shall keep personnel and equipment clear of all Airport critical areas and active Aircraft Operations Areas (AOA) at all times during construction.

No stationary equipment or stockpiles of materials will be allowed to penetrate Runway 14-32 and 4-22 CFR Part 77 Approach Surfaces, the Runways' transitional surfaces, and the Runway or Taxiway object free areas. Non-stationary construction equipment may penetrate the FAR Part 77 Approach Surfaces for short periods with the approval of the Airport. At no time shall any construction equipment or stockpiles of materials penetrate the Runway Threshold Siting Surface, Runway Safety Area (RSA), Runway Obstacle Free Zone (ROFZ), or Taxiway Safety Area (TSA), as described in FAA AC 150/5300-13B "Airport Design" without closing the runway(s) or taxiway.

For additional information refer to the S-series Drawings in the Project Plans.

001-6.2 FLAG PERSONS. The Contractor shall provide flag persons or uniformed officers at locations where the haul routes enter public streets or highways from Airport property in accordance with the applicable State and Local requirements.

Flag persons shall be equipped with: a UNICOM radio (123.0 MHz), Contractor radios, and a broom, shovel, and brush (and instructed to remove any debris that might be left by the equipment on

pavement areas). Each flag person shall be provided with and shall wear at all times that they are directing traffic, an approved striped vest of a type specifically designed for use by traffic control personnel.

001-6.3 STORAGE AREA AND EQUIPMENT YARD. The areas for storing materials, and for servicing, repairing and parking construction equipment (Contractor's Staging Area and Auto Parking Areas) are located as shown on the Plans (see Drawing No. S1.1).

Equipment fueling and maintenance will only be allowed within the staging areas. The Contractor shall adhere to the Local, State, and Federal Storm Water Pollution Prevention Plan guidelines.

The Contractor will only be permitted to store equipment and materials in the Contractor's Staging Area. All equipment booms shall be lowered at the close of each day's work or when stored. No equipment or material shall be stored closer than ten (10) feet to the Airport's fence lines.

The Contractor (and any Subcontractors) shall provide all necessary temporary fencing and gates to protect materials and equipment from pilferage. The Sponsor will not be responsible for any vandalized equipment or material stored either on or off Airport property.

Any area occupied by the Contractor shall be maintained in a clean and orderly condition satisfactory to the Engineer. Particular attention shall be given to the elimination of combustible rubbish or debris in the areas, and none shall be left exposed overnight or at other periods of time the work is shut down.

At the completion of the Contract, all Contractor's and Subcontractor's facilities will be removed promptly in a workmanlike manner, and the area shall be restored to original condition, and left clean and free of all debris or surplus material.

The cost of restoration, including but not limited to, regrading, loam, seed, mulch, pavement repair and other restoration, shall not be measured for payment; rather, the restoration work shall be considered incidental to the project.

001-6.4 HAUL ROUTES. The Contractor shall be granted access to the airfield but shall restrict activities to the designated haul routes (roads), staging areas, and work areas as shown on the Plans.

Haul routes shall be as shown on the Plans (see Drawing No. S1.1). The Contractor's vehicles and equipment shall operate within the limits of the marked haul routes. The maximum speed limit on all haul routes is **15 miles per hour**.

The Contractor shall construct haul roads shown in non-paved or turf areas. The haul road shall be constructed to support the equipment and vehicles that will be using it.

The Contractor shall be responsible for all improvements necessary to construct the haul road. These improvements shall include, but not be limited to, stripping and stockpiling of topsoil, excavation, placement of base material (gravel, recycled asphalt pavement, or other suitable material), and grading and compaction of the base material. The thickness of the haul road base material shall be sufficient to allow passage of the heaviest vehicle anticipated to utilize the haul road without considerable rutting.

The Contractor shall maintain all haul routes (roads) during construction. At the completion of the work, all haul routes constructed or disturbed shall be restored to their original condition or better before the Contract will be considered complete. This includes any damage to paved surfaces caused by the Contractor's activities. Unless otherwise shown on the Plans, the construction or improvements to haul roads, all restoration of haul roads (including pavement repair), and dust

control shall not be measured separately for payment but rather shall be considered incidental to the project.

All non-paved turf areas disturbed by the Contractor's operations shall be scarified or otherwise loosened to a depth not less than five inches (5"). Clods shall be broken and the top three inches (3") of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means. This area shall then be seeded, fertilized, and mulched.

Haul routes constructed with gravel shall be restored by removing a sufficient amount of gravel to allow for four inches (4") of topsoil to be placed, graded, seeded, fertilized and mulched. Grades and grading required for the restoration of constructed gravel haul routes shall be as directed by the Engineer.

All pavements damaged by the Contractor's activities shall be repaired to equal or better than prior conditions and to the satisfaction of the Engineer. The work may include, but not be limited to, saw cutting and removing damaged pavement, repair or replacement of base materials, tack coating of existing pavement edges, placement of hot bituminous concrete pavement meeting current MassDOT Standard Highway Specifications, placed in two (2) lifts matching the thickness of the existing pavement, and re-marking of the pavements.

When public roads and highways are used as haul routes, it will become the Contractor's responsibility to obtain the proper permits needed for this function and to obey all rules and regulations pertinent to the public road and highway.

The Contractor shall obtain all required permits to access properties from adjacent rights-of-way (e.g. driveway permits).

The cost of the restoration and protection of haul routes, including, but not limited to: regrading, topsoil, seed, mulch, fertilizer, pavement repair, and other restoration shall not be measured for payment; rather, the restoration and protection work shall be considered incidental to the project.

001-6.5 AIRPORT OPERATION AND SAFETY REQUIREMENTS. Normal Airport operation will be conducted on the airfield and outside of closed areas during construction, and the work shall be carried on in such a manner as not to interfere with the necessary operation of the Airport. The Contractor shall take all precautions necessary to ensure the safety of operating aircraft, as well as their own equipment and personnel.

The Airport Operator shall provide an Airport Operations Coordinator who shall have the authority to open and close facilities, issue and cancel NOTAM(s), and to coordinate with the Airport users. For the purposes of this project, this person shall be the Airport Manager, Mr. Kevin Bullock, or the designated representative. No construction operations shall be permitted within the Runway Threshold Siting Surface, Runway Safety Area (RSA), Runway Obstacle Free Zone (ROFZ), or Taxiway Safety Area (TSA), as defined on the Plans, unless prior approval has been obtained from the Airport Operator and the proper precautions have been implemented. When permission has been granted to work inside these limits, no equipment shall be left within the areas when not actually working. During lunch hours, breaks in the daily work schedule, nights, weekends and the days when work is not permitted or is not progressing, the equipment shall be located outside of the Runway Threshold Siting Surface, Runway Safety Area (RSA), Runway Obstacle Free Zone (ROFZ), or Taxiway Safety Area (TSA). All booms shall be lowered when the equipment is not in operation. No construction operations, including an open flame, such as welding or burning, shall be carried on near any aircraft.

The Contractor shall obey all instructions as to the operation and routes to be taken by equipment traveling on Airport property. Any signs, lights, signals, markings, traffic control, and other required

devices shall be provided and maintained by the Contractor during the work, subject to the approval of the Engineer. No aircraft pavement or approach aid currently in service shall be left out of service overnight, unless otherwise noted in the Plans.

If construction fence is not otherwise required, the Contractor shall stake and permanently mark on the ground with a readily recognizable marking (football field marking or similar material) the restriction lines parallel to the taxiways and runways adjacent to the work and the approach zone limits so that workers can readily recognize the limitations.

001-6.6 REQUIRED COMPLIANCE OF CONTRACTOR PERSONNEL WITH AIRPORT SAFETY AND SECURITY MEASURES. The Contractor shall take all precautions necessary to ensure the safety of operating aircraft, as well as their own equipment and personnel.

The Contractor shall be responsible for meeting all applicable FAA, MassDOT Aeronautics Division, and Airport regulations concerning the maintenance of security as described in AC 150/5370-2G, *Operational Safety on Airports During Construction*. This includes, but is not limited to, the control of access to the AOA through the project work areas. The Contractor is responsible for any temporary fencing, gates, or security arrangements needed to meet these requirements. See Plans for additional information on operations and safety during construction.

001-6.7 TRENCHES AND EXCAVATIONS AND COVER REQUIREMENTS. The Contractor will not be permitted to leave any trenches or excavations exceeding three inches (3") in depth open within active Runway Safety Areas (RSA), Object Free Areas (OFA), and other active Aircraft Operation Areas (AOA) at night, on weekends, or at other times when work is not actually taking place on the excavation. All excavations shall be backfilled and compacted, and the pavement shall be repaired and properly cured prior to the area being reopened to traffic.

Prior to the close of work each day, the Contractor shall ensure that the work area within active Runway Safety Areas (RSA), Object Free Areas (OFA) and other active Aircraft Operation Areas (AOA) are graded away from the pavements at a maximum slope of 5% and shall be left in such a condition that it will drain readily and effectively and will not pose a hazard to vehicles or aircraft. No piles of soil shall be left unspread, no sharp changes in grade will be permitted, and the surface shall be thoroughly compacted.

001-6.8 AIRPORT IDENTIFICATION BADGES AND ON AIRFIELD DRIVER TRAINING. The Contractor and their Subcontractors will be required to have key employees obtain Airport Identification Badges (requires photo to be taken at the Airport) and attend an on-airfield drivers training class. The only individuals that will be allowed to operate vehicles or escort other vehicles will be personnel with Airport identification badges with on airfield driving privileges.

While on the airfield, any non-badge personnel shall be under the supervision of an individual who has a valid Airport identification badge at all times. In addition, all non-badge personnel shall be within 1,000 feet and within eyesight of an individual who has a valid Airport Identification Badge at all times.

Airport Identification Badges can be obtained through the Airport. The estimated processing time for identification badges is three (3) weeks.

At the completion of the project, all identification badges shall be returned to the Airport.

001-6.9 VEHICLE IDENTIFICATION. All Contractor vehicles shall have the company identification plainly visible on both sides of the vehicle in order to identify the vehicle and a unique and visible identification number or letter.

In addition, each Contractor's vehicle operating on the Airport or public roads shall be equipped with an amber flashing light. Each Contractor's motorized vehicle or equipment operating within the Airport or near an active runway approach shall be equipped with an amber flashing light and a three foot (3') square flag consisting of international orange and white squares not less than one foot (1') displayed in full view above the highest point on the vehicle.

001-6.10 ESCORT VEHICLES. Escorts are required within the Airport property for all vehicle and/or equipment operators that do not have the required airfield driver training defined in this section.

001-6.11 WILDLIFE MANAGEMENT. The Contractor shall be responsible for the management of wildlife in the designated work areas to the satisfaction of the Engineer.

No wildlife attractants, such as food scraps, grass seeds, or ponded water, shall remain on or near the Airport property. The Contractor shall be responsible for maintaining the construction site in the designated work areas to the satisfaction of the Engineer.

001-6.12 FOREIGN OBJECT DEBRIS (FOD) CONTROL PROVISIONS. Waste and loose materials, commonly referred to as Foreign Object Debris (FOD) are capable of damaging aircraft and are a life safety concern. Contractors and their employees shall not leave or place FOD on or near active aircraft movement areas. Materials tracked onto these areas shall be continuously removed during the construction project as specified by AC 150/5730-2G "Operational Safety on Airports During Construction".

The Contractor shall take all necessary precautions to prevent FOD, including but not limited to, covering dumpsters, securing store materials, cleaning tires prior to traveling on pavements, and other measures as directed by the Engineer.

001-6.13 HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT. All hazardous and unsuitable materials, as identified on the Plans and Specifications or as removed by the Contractor, shall be legally disposed of by the Contractor off Airport property.

001-6.14 INSPECTION REQUIREMENTS. Representatives of the FAA, MassDOT Aeronautics Division, Engineer and the Town of Mansfield may inspect the work area(s) within their respective jurisdictions at any time. Should they identify work being performed outside of the permitted area(s), or in violation of the issued permits, the Contractor shall rectify the violations to the satisfaction of FAA, MassDOT Aeronautics Division, Engineer and the Town of Mansfield.

001-6.15 LIGHTED BARRICADES. The Contractor shall install lighted barricades as shown on the Plans or as directed by the Engineer. All lighted barricades shall be low profile Multi-Barrier AR-10x96 HDPE Airport Barricades as manufactured by OTW Safety, or an approved equal.

Barricades shall be weighted to resist jet blast and propeller wash.

The lights on the lighted barricades shall be LED solar powered. The LED solar powered lights shall be compatible with the barricade requiring no mechanical fasteners and shall be capable of operation in both flashing and steady burn mode.

The Contractor shall provide, assemble, store, transport, place, reposition, and maintain all lighted barricades for the duration of the project. The cost of the lighted barricades shall not be measured separately for payment, but rather they shall be considered incidental to the project.

ntal to the project.

001-6.16 RUNWAY CLOSURE MARKERS. The Contractor shall provide all materials, equipment, and labor as required to install runway closure markers, lighted barricades, and other visual aids as

indicated on the Plans or directed by the Engineer. Lighted closure markers meeting FAA AC 150/5345-55A shall be utilized and placed on the runway designation markers for Runway 14-32 while the runway is closed. Vinyl runway closure markers may be utilized for Runway 4-22. Payment will be made for the lighted runway closure markers on Runway 14-32; however, no separate measurement for payment will be made for the vinyl runway closure markers on Runway 4-22.

001-6.17 ORANGE CONSTRUCTION FENCE. Construction fence shall be four (4) foot high, heavy-duty, oval mesh, orange snow fence. Construction fence shall be manufactured using ultraviolet resistant, high density polyethylene and shall have a temperature range between -60 degrees F to 180 degrees F, a tensile yield strength of 3,300 psi, a tensile strength of 370 pounds per foot, elongation at break of 150 percent, and a nominal mesh opening of 1-¼ inch by 1-¼ inch. Post for the construction fence can, at the Contractor's option, be either metal or hardwood. Construction fence is to be secured to the posts utilizing plastic zip ties. The Contractor shall provide shop drawings for approval for the Orange Construction Fence and Fence Posts.

Construction fence posts shall be driven into the earth. Spacing of posts shall not exceed ten (10) feet on center. Posts shall be driven into the earth to a depth as indicated on the Plans. If no depth is indicated the depth shall be twenty-four inches (24").

The fabric shall be firmly attached to the posts as shown on the plans. All fabric 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.

001-7.1 RADIO CONTROL. The Contractor shall have two-way radio communication between the radio control vehicle and their field office, superintendent's vehicle, flag persons, and escort vehicles. No FAA or other Airport frequency will be used for this purpose. These radios shall be purchased, installed, maintained, and operated at the Contractor's expense.

The Contractor shall have on-site at all times at least one (1) radio per working crew, which shall be continuously monitored by a competent individual at all times during working hours. The radio shall be a two-way radio capable of communicating with the Manfield Municipal Airport UNICOM frequency of 123.0 MHZ, and the radio shall be capable of reliable two-way communication from any location on the Airport.

The Contractor shall, before the start of construction, test all radios with the appropriate agencies and or Airport Operation Coordinator to demonstrate the capabilities and to demonstrate the performance of the operator and the equipment. Radio control will be required at all times. Radio control and flag persons will be required whenever the Contractor's vehicle(s) and equipment are on or crossing active runways, taxiways or aprons.

001-7.2 CONTRACTOR RADIO. The Contractor shall supply the Engineer with one (1) two-way radio or mobile phone, set at the Contractor's frequency as specified above. At the completion of the project, the radio or phone will be returned to the Contractor.

001-8.1 ENGINEER'S FIELD EQUIPMENT. The Contractor shall furnish and maintain during construction of the improvements embraced in this Contract, suitable field equipment for the Engineer. The field equipment shall be for the exclusive use of the Engineer.

The equipment shall include the following:

1. One (1) high-speed internet connection via a portable Wi-Fi air card or “hot spot” using data over a wireless cellular network. The device shall be supplied with all charging and connection cables.
2. One (1) aviation handheld radio for two-way communication with the Manfield Municipal Airport UNICOM frequency (123.0 MHz). The radio shall be a handheld unit, supplied new, with one (1) spare battery, exterior antenna (magnetic mount), 12-volt battery charger and ear piece. The charger shall be capable of charging spare batteries when they are not connected to the radio. The radio shall be an ICOM IC-A14 or approved equal. At the completion of the project, the aviation handheld radio and accessories shall be returned to the Contractor.

The Contractor shall set up equipment specified above and provide all passwords for devices, as applicable. The equipment shall be provided complete, functional and ready for use. The Contractor shall pay all monthly charges, including for minutes, text messaging and data usage throughout the duration of the project.

ces, as applicable. The equipment shall be provided complete, functional and ready for use. The Contractor shall pay all monthly charges, including for minutes, text messaging and data usage throughout the duration of the project.

The Contractor shall provide temporary sanitary facilities on or near the Work Site. The facilities shall be a Porta Potty style unit. Weekly servicing of the facilities is required. The facilities shall be for the exclusive use of the Contractor and the Engineer.

The Contractor shall be responsible for maintenance, repair, and loss of all equipment provided for the duration of the Contract. At the completion of the Contract, all of the required Engineer’s Field Office Equipment shall be returned to the Contractor.

Regardless of the cause, the Contractor shall not be eligible for additional payment for the Engineer’s Field Equipment for periods of time when work on the project has stopped.

001-9.1 CONSTRUCTION LAYOUT. The Engineer will provide survey control points (with horizontal and vertical control) to be used for the layout of construction baseline(s) and provide elevation control (benchmark). All construction layout will be the responsibility of the Contractor. The periodic resetting of the baselines during construction shall be the responsibility of the Contractor.

001-10.1 MAINTENANCE OF THE CONSTRUCTION SITE. The Contractor shall keep the construction site free of paper, boxes, and other debris, which could be blown onto the runways and taxiways. The Contractor's main staging area shall be supplied with a dumpster with cover. All Airport pavements shall be kept clear and clean at all times. All rocks, mud, and other debris carried onto the Airport pavement by the Contractor's equipment must be reported to the Engineer or the Sponsor. The Sponsor will then close the affected area to traffic, and the Contractor will immediately sweep, wash, and/or vacuum the area to the satisfaction of the Sponsor.

The Contractor shall also be responsible for supplying any other equipment as may be necessary to clean all areas that are contaminated as a result of their operations to the complete satisfaction of the Engineer and the Sponsor.

Trucks loaded in the construction area shall have loads trimmed as necessary to assure that no particles, stones or debris will fall off and that no legal load limits are exceeded.

The Contractor shall be particularly careful not to track foreign material onto pavements outside of and within the Airport. The Contractor shall be responsible for removing foreign materials from vehicle tires prior to the vehicle leaving its work area.

001-10.2 TEMPORARY WORK STOPPAGES. If the Contractor requests a temporary stoppage in the Contract, and if that stoppage is approved, the Contractor shall be responsible to secure and stabilize all areas disturbed by Contractor operations for the period of the shut down and maintain the site to the satisfaction of the Engineer. All erosion and sedimentation control measures shall be put in place and maintained and checked regularly through the course of the temporary work stoppage. The Contractor shall respond to requests from the Sponsor for non-compliant conditions within twenty-four (24) hours from receipt of said complaint. No additional compensation will be allowed for temporary work stoppages.

001-11.1 "AS-BUILT DRAWINGS" (RECORD DRAWINGS) AND FINAL SURVEY.

- a. The Contractor shall maintain a set of drawings on-site on which shall be accurately recorded, as the work progresses, the actual "As-Built" areas of all work, indicating thereon all variations from the Plans. This record of "As-Built" conditions shall include the work of all Subcontractors. These drawings shall be kept current and available for review by the Engineer at all times.

The Contractor shall record any unknown active or abandoned underground cables or other utilities discovered during construction on the final "As-Built" drawings. If a cable is damaged during construction, the permanent repair must be clearly marked in full description on the "As-Built" drawings.

If the Contractor maintains site information using a GPS survey system, a Data File of the survey must be provided to the Engineer, and further investigations and/or corrections must be made as indicated by the Engineer.

- b. Prior to final acceptance of the work, the Contractor shall have a final survey made by a Land Surveyor licensed in the Commonwealth of Massachusetts. The final survey shall consist of taking cross sections at the same stations as the design cross sections with elevations recorded at every location where a proposed grade was shown on the design cross section, at all changes in grade, at the top and toes of slopes, and at the limits of work. The survey shall include the distance from the construction baseline or centerline of each elevation, measured horizontally to the nearest 0.1 foot. The "As-Built" locations (station and offset from the construction baseline or centerline) and "As-Built" rim and invert elevations of all drainage structures and pipes and electrical structures will be included in the survey. The elevation of all pavements and structures and pipes shall be measured to the nearest 0.01 foot and elevation in turf area shall be measured to the nearest 0.1 foot and shall be based on NGVD MSL from the project benchmark. The final Runway End Coordinates shall be surveyed to within to an accuracy of not less than 1/8" and the final location shall be identified by installing a Magnetic Nail (Magnail) survey marker.

All "As-Built" information from the final survey shall be shown on the Record Drawings. In addition, a copy of the electronic survey information prepared in a standard surveyor's format that can be easily followed and checked shall be provided.

- c. The Record Drawings and the final survey information shall be submitted to the Engineer for review and shall be corrected by the Contractor as required. The Record Drawings and final

survey shall be completed and accepted by the Engineer before the time when the final payment shall be due and payable.

001-12.1 MAINTENANCE OF THE EXISTING AIRFIELD LIGHTING. All existing lighting and NAVAID systems not under construction on the Airport which are open to aircraft shall be operational each night and during inclement weather throughout the construction period. Any area of the Airport which has been closed, whether for daytime only, or overnight shall have lights covered or disconnected from the areas of the Airfield which remain available for aircraft operations. The coverings shall be fastened or anchored securely using non-destructive means that are capable of withstanding jet blast or propeller wash. Coverings shall also be capable of blocking out **ALL** visible light emanating from the fixture.

It shall be the responsibility of the Contractor to check the operation of all lights each day, to notify the Engineer of any problem and make any repairs necessary due to their operation.

001-13.1 UNDERGROUND UTILITIES AND CABLES. The approximate locations of known utilities and underground cables are shown on the Plans. Prior to commencement of any excavation, the Contractor shall verify the locations and depths of underground utilities and cables.

The Contractor shall coordinate all work with the following agencies as appropriate.

1. Dig Safe and indicated utilities
2. The FAA – ATO Sector Field Office (508-386-3401)
3. Town of Mansfield Department of Public Works
4. Town of Mansfield Fire Department
5. Town of Norton Water/Sewer Department
6. Town of Norton Highway Department
7. Eversource Energy
8. Mansfield Municipal Electric
9. Local telecommunications company(s)
10. Mansfield Municipal Airport

The Contractor shall furnish and install all materials necessary to protect existing underground utilities and cables that are to remain. The Contractor shall comply with the current version of the Dig Safe Law, effective Dec 17, 1998, or as revised. The Contractor is required to premark the construction-site and give notice of planned digging near utility, cable, and fuel lines.

The Contractor shall locate and verify all underground utilities and cables at no additional cost to the Sponsor. All underground utilities and cables discovered shall be recorded on the as-built drawings.

The Contractor shall repair, at the Contractor's own expense, any underground cables damaged by their operations including any damage done by driving their equipment over existing underground cables. The repair of FAA cables shall be inspected and approved by the FAA. The repair of utilities shall be inspected and approved by the appropriate utility.

001-14.1 NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION - FAA FORM 7460-1. Prior to Construction, the Engineer shall file FAA Form 7460-1 *Notice of Proposed Construction or Alteration*. This form can be filed online on the Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) website: [Obstruction Evaluation / Airport Airspace Analysis \(OE/AAA\)](#).

No work may commence until authorization is received from the FAA through the 7460-1 process, unless such work is authorized by the Sponsor. The Engineer should allow a minimum of ninety (90) days for FAA review of the filed 7460-1.

001-14.2 MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSDOT) AERONAUTICS DIVISION AIRSPACE ANALYSIS (AIRSPACE REVIEW). Prior to Construction, the Engineer shall file a Massachusetts Department of Transportation (MassDOT) Aeronautics Division Airspace Analysis (Airspace Review) in reference to the submitted FAA Form 7460-1 filing. This form can be filled online on the MassDOT website: [Submit an Airspace Review](#)

No work may commence until authorization is received from MassDOT through the airspace review process, unless such work is authorized by the Sponsor.

001-15.1 ACCEPTANCE TESTING. All acceptance testing of materials required by various sections of the Specifications will be at no cost to the Contractor unless otherwise specified herein. However, the Contractor will pay for the cost of any retesting required because the materials did not pass the initial or subsequent acceptance tests.

001-15.2 OPERATION AND MAINTENANCE (O&M MANUALS). Operation and Maintenance Manuals shall be provided for all new equipment installed on this project.

001-16.1 REQUIRED SUBMITTALS. The following items must be submitted to the Engineer as part of this Specifications section (along with all other submittals specifically referenced elsewhere in the Plans and Specifications):

- Submittal Log
- Project Schedule
- Insurance Certificates
- Written Method of Operation and Safety Plan Compliance Document
- Aviation Handheld Radio
- As-Built Plans
- Payroll Certifications
- OSHA Cards
- Disadvantaged Business Enterprise Participation Worksheets
- Signed Contractor's Guarantee (after substantial completion)

001-17.1 DAVIS-BACON WAGE COMPLIANCE. This project is subject to the requirements of the Davis-Bacon Act, The Contract Work Hours and Safety Act, The Copeland Act, and the Fair Labor Standards Act.

If both Federal and State rates are applicable, it shall be understood that the higher of two (2) rates shall control.

The Contractor (also referred to as the Principal Contractor, Prime Contractor or General Contractor) is responsible for full compliance of all employers (the Contractor, Subcontractor, any/all lower-tier Subcontractors) with the labor standards and provisions applicable to this project.

All certified payrolls shall be channeled through the Contractor. It shall be the Contractor's responsibility to review all Subcontractors', and any/all lower-tier Subcontractors', certified payrolls for compliance with the labor standards provisions applicable to this project. Each Subcontractors' and any/all lower-tier Subcontractors' payroll submission shall be reviewed and stamped by the Contractor as "reviewed and found to be in compliance" prior to submission to the Engineer.

Certified payrolls shall be submitted in a format as prescribed by the law. If the project requires a work classification and rate that is not contained within the decisions or classifications contained within the Specifications, it shall be the Contractors' responsibility to request an additional classification(s) from the Department of the Labor. Failure of the decision to include a classification

or wage determination does not relieve the Contractor from the obligation to meet applicable classification and wage rates.

The Contractor shall post the project's wage rate classifications at the work site in a location approved by the Engineer prior to starting work.

The Awarding Authority is required to conduct Employee interviews for compliance with the Davis-Bacon Wage requirements. Based on the duration of this project, it is anticipated that three (3) interviews will be conducted. The Contractor shall make the required employees available to the Engineer for the purpose of conducting the interviews.

Certified payrolls shall be submitted and accepted prior to the acceptance of any Periodic Cost Estimates (PCE) for the work period covered in the PCE.

001-18.1 OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) DOCUMENTATION.

All employees to be employed at the job site shall have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration (OSHA) that is ten (10) hours in duration at the time the employee begins work.

The Contractor shall furnish documentation of successful completion of said course by either a copy of the OSHA card or a letter or certificate of completion from the person or company that administered the course. OSHA documentation shall be provided prior to any person beginning work on the site. It is recommended that Contractors and Subcontractors provide a copy of OSHA documentation for all employees prior to the start of work. Periodic Cost Estimates will not be accepted for payment unless all OSHA documentation has been received.

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documentation has been received.

001-19.1 WORK FORCE UTILIZATION REPORTING. The Contractor shall submit monthly work force utilization reports. The reports shall include the work force of the Contractor, Subcontractors, and lower tiered Subcontractors. The reports shall include the following:

- A list of all workers (including classification) that worked on the project for the reporting period. This shall include all workers in addition to those employed on the job site, including Principals, Project Managers, and other office staff.
- Number of hours that are worked on the project by each person listed for the reporting period.
- Total number of hours, including the Contractor, Subcontractor, and lower-tiered Subcontractors.
- Totals shall be provided separately for the Contractor, Subcontractor, and lower tiered Subcontractors.

Monthly utilization reports will be required prior to the acceptance of any Periodic Cost Estimate (PCE).

001-20.1 MONTHLY DBE REPORTING. The Contractor shall submit monthly Disadvantage Business Enterprise (DBE) reports. The Contractor shall use the report form as included within this Specification. The report shall be submitted regardless of if any DBE participation took place during the period indicated.

The Contractor shall continually monitor DBE participation on the project. If it appears that the actual DBE will be lower than indicated in the Contractor's DBE Letter of Intent, the Contractor shall

provide written notification, and indicate just reason for the change. The Contractor shall further provide additional Good Faith Effort documentation that effort was made to replace this DBE participation as outlined in the Supplemental General Provisions.

Monthly DBE reports will be required prior to the acceptance of any Periodic Cost Estimate (PCE). Each DBE will be required to submit a separate DBE form.

001-21.1 CONTRACT CHANGE ORDERS. Any work to be included in this project by change order must be approved by the Sponsor, FAA, MassDOT Aeronautics Division and the Engineer **prior to the start of such additional work**. Any additional cost for change order work or significant deviation from bid quantities shall be at a fair and reasonable cost to the Sponsor. The Contractor shall provide a detailed breakdown of cost and all resulting unit prices, on all change order work. The breakdown shall use Contract unit prices if available. If Contract unit prices are not available, the Contractor shall provide a detailed breakdown of costs indicating labor, equipment, and materials as separate line items and then sum together for a subtotal. Material costs shall include copies of suppliers' quotes. Administrative costs, including, but not limited to, office time and cost to increase the bonds or insurance, will not be eligible for consideration. Labor costs for pricing change orders shall be actual rate including fringes without mark-up. Equipment costs shall be at standard industry rates, not to exceed rates as published by RS Means or other approved industry rate guide line.

Mark-up for overhead and profit shall be limited to 10% for the Contractor or Subcontractor performing the Change Order work. When a Subcontractor or lower-tiered Subcontractor is performing the Change Order work, each Subcontractor or Contractor above the firm performing the Change Order work shall be limited to a five percent (5%) mark up for overhead and profit. The total mark-up for any Change Order shall not exceed twenty percent (20%).

001-22.1 SUBSTANTIAL COMPLETION. Substantial Completion shall be defined when all payment items of work are complete to the satisfaction of the Engineer and all the work can be occupied or utilized for its intended use by the Sponsor without interference or restrictions.

At the date of substantial completion, if work on the project has stopped and the Contractor submits a request, the Sponsor may grant a temporary suspension to the Contract time.

The Contractor shall complete all field punch list work within thirty (30) calendar days of substantial completion or receipt of the preliminary punch list from the Sponsor, whichever is later. All administrative and non-field punch list work shall be completed within sixty (60) calendar days of the date of substantial completion. The Sponsor reserves the right to resume Contract time if the punch list work is not completed within this specified time and to access liquidated damages in accordance with the Specifications for each and every calendar day that the work remains incomplete beyond the contractual Contract time.

001-23.1 SHOP DRAWINGS, CERTIFICATIONS AND OTHER SUBMITTALS. The Contractor shall submit Shop Drawings, certifications and other submittals as required by each specific section contained within individual Specifications sections. Please refer to the Supplemental General Provisions Section for Shop Drawing forms and procedures.

001-24.1 FLIGHT CHECK. The FAA will complete a flight check of the installed NAVAIDs at the end of the project. The Contractor may need to complete adjustments until a passing flight check is received. This work is considered incidental to the NAVAID installation items.

METHOD OF MEASUREMENT

001-25.1 AS-BUILT PLANS AND FINAL SURVEY. The work involved in providing, completing, installing, and/or maintaining the As-Built Plans and Final Survey, and related items will be measured as a single item including but not limited to, providing Record Drawings as specified in section 001-11.1, restoring the site upon completion of the work, and all related costs.

001-25.2 LIGHTED RUNWAY CLOSURE MARKERS. The quantity to be paid shall be the number of lighted runway closure markers provided for the project and installed as completed units in place, accepted, and ready for operation. The work involved in hauling, placing, connections for power, maintaining, and fueling as described in Section 001-6.16 shall be incidental to this item.

001-24.3 ORANGE CONSTRUCTION FENCE. Orange Construction Fence shall be measured for payment by the linear foot. Measurement will be along the top of the fence from center to center of posts installed and accepted by the Engineer including, but not limited to, fabric, posts, wire ties, installation, maintenance, repair, removal, disposal and all associated labor and materials.

001-25.4 OTHER FACILITIES OR REQUIREMENTS. No separate measurement of payment will be made for the provisions of facilities or the compliance with requirements under this section of these Specifications, except as specified above. The provision of facilities and compliance with requirements covered by this section of these Specifications shall be considered incidental to the various items of work specified, hereinafter and all costs in connection with such provisions and compliance shall be included in the various unit and lump sum prices bid for the work items specified under other sections of these Specifications.

BASIS OF PAYMENT

001-25.1 AS-BUILT PLANS AND FINAL SURVEY. Payment shall be made at the Contract lump sum price for As-Built Plans and Final Survey, measured as specified above, which prices and payment thereof shall constitute full compensation for all labor, materials, equipment, costs, fees, incidentals, and expenses necessary to the satisfactory completion of the work. The payment will be made per the following schedule:

- 100% payable upon receipt of all required items, accepted by the Engineer.

001-25.2 LIGHTED RUNWAY CLOSURE MARKERS. Payment shall be made at the contract unit price for each Lighted Runway Closure Marker provided for the project, which prices and payment thereof shall constitute full compensation for all labor, materials, equipment, costs, fees, incidentals, and expenses necessary to the satisfactory completion of the work.

001-25.3 ORANGE CONSTRUCTION FENCE. Payment shall be made at the Contract unit Price per linear foot for the fence, measured as specified above, which prices and payment thereof shall constitute full compensation for all labor, materials, equipment incidentals, and expenses necessary to the satisfactory completion of the work.

Payment will be made under:

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
M-001-1	As-Built Plans and Final Survey	Per Lump Sum
M-001-2	Lighted Runway Closure Marker	Per Each
M-001-3	Orange Construction Fence	Per Linear Foot

END OF ITEM M-001

ITEM M-002 ENVIRONMENTAL PERMITTING COMPLIANCE

CONTRACT DOCUMENTS

002-0.1 This section of these Specifications is a part of the Contract Documents as defined in the General Provisions. All applicable parts of the balance of the Contract Documents are equally as binding for this section as for all other sections.

Attention shall be directed to Section M-001 of these Specifications entitled, "Summary of Work and Special Work Requirements" for additional contractual obligations of the Contractor.

DESCRIPTION

002-1.1 This item shall consist of the work required for compliance with the Federal, State, and Local environmental permits governing this project that is not specifically called out in other Specifications sections. The Contractor shall be responsible for the implementation of all applicable aspects of the permits and mitigation plans listed in section 002-1.2 below during construction and for the duration of the Warranty Period as defined in the Supplemental General Provisions.

It is the responsibility of the Contractor to adhere to the requirements of the permits, rules, and agreements applicable to this project. For additional information on compliance, refer to Specification sections M-001 and P-151.

002-1.2 COMPLIANCE WITH PERMITS, LAWS, RULES, AGREEMENTS, AND REGULATIONS. The Contractor shall be responsible for following Laws, Rules, and Regulations having jurisdiction over the proposed work areas, including but not limited to:

- a. All applicable laws and rules and regulations of the United States; the Commonwealth of Massachusetts; the Town of Mansfield, Massachusetts.
- b. Federal Aviation Administration (FAA) Federal Airport Regulation (FAR) Part 77 (latest edition) and Advisory Circular 150/5370-2G *Operational Safety on Airports During Construction* (or latest edition) and the project Plans and Specifications.
- c. Town of Mansfield, Conservation Commission, *Order of Conditions 211-1018* (Provided in Appendix A attached to this section).
- d. Town of Norton, Conservation Commission, *Order of Conditions 250-1177* (Provided in Appendix A attached to this section).
- e. All other applicable permits, including but not limited to; the ones listed in Specification section M-001, "Summary of Work and Special Work Requirements".

002-1.3 ON-SITE COPIES OF PERMIT DOCUMENTS. The Contractor shall have on-site at all times a paper copy of the project-specific permits and agreements listed in section 002-1.2 above. Paper copies of the required permits, agreements, and supporting documents will be included in the Contract Documents between the Owner and the Contractor.

Any fines, fees, or other penalties assessed against the Owner as a result of the Contractor not having the proper documents on site will be deducted from payment amounts, as allowable.

002-1.4 MASSDEP PERMIT SIGNS. Prior to the start of any work on-site, the Contractor shall furnish and install weatherproof signs with the wording “MASSDEP FILE NUMBER 211-1018 and 250-1177”, as shown on the Plans. The signs shall include a post and shall be placed as shown on the Plans or as directed by the Engineer. The signs shall remain in place and legible for the duration of the project and may not be removed until acceptance of the work by the Owner and the permitting agencies, and upon the removal of all sedimentation and erosion control measures. Furnishing, installing, maintaining, and removing the signs shall not be measured separately but shall be considered incidental to the overall project.

METHODS

002-2.1 MONITORING AND REPORTING ASSISTANCE. Before, during, and after construction, the Environmental Monitor, working as a subconsultant to the Engineer, shall prepare, circulate for review, revise, submit, and coordinate reports, notices, letters and other written, verbal, and electronic communications relating to the permitting and environmental conditions of the permitted areas in accordance with the requirements of permits as referenced in section 002-1.2. The Contractor shall provide input and assistance, when requested.

If any proposed action by the Contractor or their Subcontractors requires MassDEP, local Conservation Commission, or other agency approval, the Contractor shall submit a written request for permission to do the work. The request shall include any Plans, Diagrams, Calculations, Photographs, or other material needed to review the request.

The monitoring and reporting assistance specified herein shall begin at the execution of the Contract and end at the completion of the Warranty Period as defined in the Supplemental General Provisions Section 16.

002-2.2 PRECONSTRUCTION PERMITTING AGENCY MEETING. Prior to the start of construction, the Contractor shall attend one (1) pre-construction meeting with the Owner, the Engineer, the Environmental Monitor, MassDOT Aeronautics, FAA, and the permitting agencies, for the purpose of reviewing environmental permits and discussing means and methods of conducting the work. This shall be in addition to the normal pre-construction meeting between the Owner, the Contractor, and the Engineer. The Engineer will make all reasonable attempts to schedule the pre-construction meetings on the same day.

002-2.3 SCHEDULING. As required by the permit listed in Section 002-1.2(d), all tree removal and stump grinding work for this project shall be performed while ground conditions are “frozen, or dry and stable”. The Contractor, upon execution of the Contract with the Owner, shall submit an overall project schedule, all required shop drawings, and permit compliance documents within thirty (30) calendar days.

Upon issuance of the Notice to Proceed, the Contractor shall proceed with the installation of temporary sedimentation and erosion control measures. Once frozen or dry and stable ground conditions have been achieved, tree removal, and stump grinding activities may begin.

002-2.4 CONTRACTOR'S COMPLIANCE WITH PERMITS, LAWS, RULES, AGREEMENTS, AND REGULATIONS. The Contractor shall pay all fines assessed against the Airport and related expenses

due to non-compliance with the Permits, Laws, Rules, and Regulations cited herein and caused by the Contractor and their personnel, Subcontractors and Vendors.

METHOD OF MEASUREMENT

002-3.1 ENVIRONMENTAL PERMIT COMPLIANCE. All work required for Environmental Permit Compliance, including installation of MassDEP signs, shall not be measured separately for payment, but shall be considered incidental to other items of work as required for the project.

002-3.2 AGREEMENTS. All work required under agreements by and/or between the Town of Mansfield and other parties shall not be measured separately for payment but shall be considered incidental to other items of work as required for the project.

END OF ITEM M-002

**SPECIFICATIONS SECTION M-002
ENVIRONMENTAL PERMITTING COMPLIANCE**

APPENDIX A

Reference	Document
M-002-A1	<i>Town of Mansfield, Conservation Commission, Order of Conditions 211-1018</i>
M-002-A2	<i>Town of Norton, Conservation Commission, Order of Conditions 250-1177</i>

APPENDIX A1

**TOWN OF MANSFIELD, CONSERVATION COMMISSION, ORDER OF CONDITIONS #211-
1108**



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 - Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:211-1018
eDEP Transaction
#:1893138
City/Town:MANSFIELD

A. General Information

1. Conservation Commission	MANSFIELD		
2. Issuance	a. <input checked="" type="checkbox"/> OOC	b. <input type="checkbox"/> Amended OOC	
3. Applicant Details			
a. First Name	JOEL	b. Last Name	BRANDWINE
c. Organization	MANSFIELD MUNICIPAL AIRPORT COMMISSION		
d. Mailing Address	6 PARK ROW		
e. City/Town	MANSFIELD	f. State	MA
		g. Zip Code	02048
4. Property Owner			
a. First Name	SHERMAN	b. Last Name	COX
c. Organization	TOWN OF MANSFIELD - CONSERVATION		
d. Mailing Address	24 GREYSTONE WAY		
e. City/Town	NORTH EASTON	f. State	MA
		g. Zip Code	02356
5. Project Location			
a. Street Address	265 FRUIT STREET *		
b. City/Town	MANSFIELD	c. Zip Code	02048
d. Assessors Map/Plat#	36	e. Parcel/Lot#	015, 022
f. Latitude	42.00084N	g. Longitude	71.19825W
6. Property recorded at the Registry of Deed for:			
a. County	b. Certificate	c. Book	d. Page
SOUTHERN BRISTOL		22637	219
7. Dates			
a. Date NOI Filed : 3/12/2025	b. Date Public Hearing Closed: 4/28/2025	c. Date Of Issuance: 5/5/2025	
8. Final Approved Plans and Other Documents			

a. Plan Title:	b. Plan Prepared by:	c. Plan Signed/Stamped by:	d. Revised Final Date:	e. Scale:
TOWN OF MANSFIELD MASSACHUSETTS, MANSFIELD MUNICIPAL AIRPORT, RUNWAY RECONSTRUCTION	MARK K. OTTARIANO	GALE ASSOCIATES	3/13/2025	

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act
Following the review of the the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act.

Check all that apply:



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- | | | |
|---|--|---|
| a. <input checked="" type="checkbox"/> Public Water Supply | b. <input type="checkbox"/> Land Containing Shellfish | c. <input checked="" type="checkbox"/> Prevention of Pollution |
| d. <input checked="" type="checkbox"/> Private Water Supply | e. <input type="checkbox"/> Fisheries | f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat |
| g. <input checked="" type="checkbox"/> Ground Water Supply | h. <input checked="" type="checkbox"/> Storm Damage Prevention | i. <input checked="" type="checkbox"/> Flood Control |

2. Commission hereby finds the project, as proposed, is:

Approved subject to:

- a. ☒ The following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

Denied because:

- b. ☐ The proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. ☐ The information submitted by the applicant is not sufficient to describe the site, the work or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310CMR10.02(1)(a).

a. linear feet

Inland Resource Area Impacts:(For Approvals Only):

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	<u> </u> a. linear feet	<u> </u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. <input type="checkbox"/> Land under Waterbodies and Waterways	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
	<u> </u> e. c/y dredged	<u> </u> f. c/y dredged		
7. <input type="checkbox"/> Bordering Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
Cubic Feet Flood Storage	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet



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8. <input type="checkbox"/> Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet		
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. <input checked="" type="checkbox"/> Riverfront Area	<u>9132</u> a. total sq. feet	<u>9132</u> b. total sq. feet		
Sq ft within 100 ft	<u>0</u> c. square feet	<u>0</u> d. square feet	<u>0</u> e. square feet	<u>0</u> f. square feet
Sq ft between 100-200 ft	<u>9132</u> g. square feet	<u>9132</u> h. square feet	<u>0</u> i. square feet	<u>0</u> j. square feet

Coastal Resource Area Impacts:

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. c/y nourishment	<u> </u> d. c/y nourishment
14. <input type="checkbox"/> Coastal Dunes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. c/y nourishment	<u> </u> d. c/y nourishment
15. <input type="checkbox"/> Coastal Banks	<u> </u> a. linear feet	<u> </u> b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	<u> </u> a. square feet	<u> </u> b. square feet		
17. <input type="checkbox"/> Salt Marshes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		



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21. ☐ Land Subject to Coastal Storm Flowage _____
a. square feet b. square feet

22.

☐ Restoration/Enhancement (For Approvals Only)

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c & d or B.17.c & d above, please entered the additional amount here.

_____ a. square feet of BVW _____ b. square feet of Salt Marsh

23.

☐ Streams Crossing(s)

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

_____ a. number of new stream crossings _____ b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not exceed the issuance date of the original Final Order of Conditions.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation



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Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work..

10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

" Massachusetts Department of Environmental Protection"
[or 'MassDEP']
File Number : "211-1018"

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before Mass DEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. The work associated with this Order(the "Project") is (1) ☒ is not (2) ☐ subject to the Massachusetts Stormwater Standards. If the work is subject to Stormwater Standards, then the project is subject to the following conditions;
- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Construction General Permit as required by Stormwater Standard 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that: *i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or



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treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures; *ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized; *iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10; *iv.* all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition; *v.* any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 19(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.
- g) The responsible party shall:
 - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
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- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions:

SPECIAL CONDITIONS FOR ORDER OF CONDITIONS FOR 265 FRUIT STREET, MANSFIELD, MA; (DEP SE 211-1018) UNDER THE MANSFIELD PROTECTION BYLAW CHAPTER 220 JOEL BRANDWINE, MANSFIELD MUNICIPAL AIRPORT COMMISSION, 265 FRUIT STREET, MANSFIELD, MA; MANSFIELD MUNICIPAL AIRPORT FOR THE RECONSTRUCTION OF THE AIRPORT'S RUNWAY, TAXI WAY AND STUB TAXIWAYS, INCLUDE REGRADING OF AREAS IN ORDER TO COMPLY WITH FEDERAL AVIATION ADMINISTRATION GRADING CRITERIA ALONG THE STORMWATER MANAGEMENT IMPROVEMENTS WITHIN 100 FEET OF A BORDERING VEGETATED WETLAND AND 200-FOOT RIVERFRONT AREA OF WADING RIVER.: 1. RECORD ORDER NO WORK CAN BE STARTED UNTIL THE ORDER OF CONDITIONS HAS BEEN RECORDED WITH THE BRISTOL COUNTY REGISTRY OF DEEDS AND THE RECEIPT OF THE ORDER IS RETURNED TO THE COMMISSION FILLED IN BY THE REGISTRY. 2. PLAN OF RECORD ALL WORK MUST CONFORM TO THE PLAN DATED, REFERENCED AS "THE PLAN OF RECORD" IN THIS ORDER. 3. LIMIT OF WORK ALL LIMITS OF WORK AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION, CLEARING, OR EXCAVATION. THE EROSION CONTROLS SHALL CONSIST OF A 8" DIAMETER BIODEGRADABLE MULCH-FILLED SILT SOCK WITH WOODEN STAKES EVERY 10 FEET ON EACH SIDES OF SOCK OR EQUIVALENT (DO NOT PIERCE SILT SOCK WITH STAKES). IN ADDITION TO THE SILT SOCK, TRENCHED-IN SILT FENCE MAY BE REQUIRED DEPENDING ON THE SPECIFIC SITE CONDITIONS. SEE THE CONSERVATION AGENT (AGENT) FOR SPECIFIC EROSION CONTROL DESIGN STANDARDS. THE APPLICANT SHALL NOTIFY THE AGENT WHEN ANY SUCH DEVICES OR MEASURES ARE INSTALLED SO THAT A SITE VISIT CAN BE CONDUCTED PRIOR TO THE COMMENCEMENT OF WORK. 4. ADDITIONAL MITIGATION THE COMMISSION RESERVES THE RIGHT TO REQUIRE ADDITIONAL MITIGATION OR EROSION CONTROL DEVICES OR MEASURES IF MITIGATION OR EROSION CONTROL DEVICES ARE NOT ADEQUATELY INSTALLED OR MAINTAINED ON SITE. 5. STABILIZATION THE APPLICANT SHALL ENSURE THAT ALL DEMARCATION (I.E. LIMITS OF WORK) AND EROSION CONTROL DEVICES WILL REMAIN IN PLACE AND BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL ALL DISTURBED AREAS ARE STABILIZED. STABILIZATION SHALL BE ACHIEVED ONCE A COMPLETE VEGETATIVE COVER IS REACHED. SEEDED AREAS SHALL BE COVERED WITH A SUITABLE PROTECTIVE COVER TO ALLOW THE SEED TO GERMINATED AND BECOME ESTABLISHED. ALL SIDE SLOPES GREATER THAN 3:1 (BUT LESS THAN 2:1) ARE TO BE COVERED WITH JUTE MESH AND SEEDED. AT NO POINT SHALL EROSION OCCUR RESULTING IN SEDIMENT ENTERING THE WETLAND AREAS. IF EROSION OCCURS, THE AGENT IS TO BE CONTACTED TO REVIEW THE EXTENT OF THE EROSION AND DETERMINE FOLLOW-UP ACTIONS. 6. ROOF RUNOFF ALL ROOF RUNOFF IS TO BE DIRECTED IN TO DRYWELLS OR EQUIVALENT DRAINAGE COMPONENTS APPROVED BY THE COMMISSION. THE COMMISSION OR ITS AGENT SHALL REVIEW THE LOCATIONS OF THE DRYWELLS. 7. CONSTRUCTION SEQUENCE A CONSTRUCTION SEQUENCE IS TO BE SUBMITTED TO THE COMMISSION PRIOR TO THE START OF WORK. 8. START WORK NOTIFICATION THE CONSERVATION



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COMMISSION OR ITS AGENT IS TO BE NOTIFIED OF THE STARTING DATE OF THE WORK PRIOR TO ITS COMMENCEMENT. 9. PRE-CONSTRUCTION MEETING PRIOR TO THE COMMENCEMENT OF WORK, A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE AGENT, THE ENGINEER AND/OR REPRESENTATIVE, AND THE GENERAL CONTRACTOR TO REVIEW THE ORDER OF CONDITIONS, SCOPE OF WORK AND CONSTRUCTION SEQUENCING. 10. OOC ON-SITE THE APPLICANT SHALL BE RESPONSIBLE TO ENSURE THAT ALL CONTRACTORS ON SITE DURING THE CONSTRUCTION HAVE RECEIVED AND REVIEWED THE ORDER OF CONDITIONS AND ALL PLANS OF RECORD. 11. WETLAND FLAGGING WETLAND FLAGGING MUST REMAIN IN PLACE UNTIL THE PROJECT HAS BEEN COMPLETED AND THE CERTIFICATE OF COMPLIANCE ISSUED. 12. COC WITH AS-BUILT THE CERTIFICATE OF COMPLIANCE SHALL BE REQUESTED IN WRITING UPON COMPLETION OF THE PROJECT. AT THE SAME TIME, THE APPLICANT OR ANY SUCCESSOR SHALL, UPON COMPLETION OF THE PROJECT; SUBMIT AN AS-BUILT PLAN AND LETTER SIGNED BY A PROFESSIONAL ENGINEER, CERTIFYING THAT THE WORK HAS BEEN DONE IN ACCORDANCE WITH THE APPROVED PLAN. 13. REVISIONS TO BE REVIEWED ANY MODIFICATIONS OR REVISIONS TO THE PLAN(S) REFERENCED IN THIS ORDER MUST BE SUBMITTED TO THE COMMISSION FOR REVIEW. FOR SINGLE FAMILY LOTS, THIS ORDER IS FOR THE STRUCTURES SHOWN ON THE PLAN OF RECORD ONLY. ANY ADDITIONAL STRUCTURES INCLUDING, BUT NOT LIMITED TO, DECKS, PATIOS, SHEDS, POOLS, WALKWAYS AND/OR ANY HARDSCAPE FEATURES MUST BE REVIEWED BY THE COMMISSION. IF, AFTER THEIR REVIEW, THE COMMISSION FINDS THAT THE CHANGES ARE NOT SIGNIFICANT ENOUGH (MINOR MODIFICATIONS) TO WARRANT AN AMENDED ORDER OR NEW NOTICE OF INTENT, THEN THE REVISED PLANS SHALL BE CONSIDERED THE NEW PLAN OF RECORD. IF THE CHANGES ARE SIGNIFICANT ENOUGH TO WARRANT AN AMENDED ORDER OR NEW NOTICE OF INTENT, THEN THE APPLICANT IS REQUIRED TO FILE ACCORDINGLY. 14. NO SYNTHETIC CHEMICALS NO SYNTHETIC FERTILIZER, HERBICIDES, PESTICIDES OR FUNGICIDES CAN BE USED; ONLY ORGANIC PRODUCTS MAY BE USED. 15. STORMWATER O&M ALL THE TERMS AND CONDITIONS SET FORTH IN THE STORMWATER MANAGEMENT PLAN FOR (PROJECT TITLE) PREPARED BY (ENGINEER), SUBMITTED ON (DATE) ARE TO BE INCLUDED WITH THIS ORDER OF CONDITIONS. ALL ON-GOING O&M PLAN ACTIVITIES ARE TO BE RECORDED AS NOTED. ALL REPORTS AND CHECKLIST ARE TO BE SUBMITTED TO THE COMMISSION AS NOTED. 16. DUMPING OF LAWN CLIPPINGS IS PROHIBITED DUMPING OF LAWN CLIPPINGS AND/OR YARD DEBRIS INTO A WETLAND AND/OR 25-FOOT NO DISTURB ZONE IS PROHIBITED. STORAGE IS PROHIBITED IN THESE AREAS AS WELL. SPECIAL CONDITIONS: IF ALLOWABLE CONSULTANT TO WORK WITH AGENT TO ESTABLISH BUFFER STRIP ALONG THE NORTH SIDE OF THE DRAINAGE SWALE/BVW WITH AN HERBACEOUS SEED MIX, TO BE MOWED ON AN ANNUAL BASIS.



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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The Conservation Commission hereby (check one that applies):

a. ☐ DENIES the proposed work which cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw specifically:

1. Municipal Ordinance or Bylaw _____

2. Citation _____

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued. Which are necessary to comply with a municipal ordinance or bylaw:

b. ☒ APPROVES the proposed work, subject to the following additional conditions.

1. Municipal Ordinance or Bylaw _____
MANSFIELD
WETLANDS
PROTECTION
BYLAW

2. Citation CHAPTER 220

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows:

SPECIAL CONDITIONS FOR ORDER OF CONDITIONS FOR 265 FRUIT STREET, MANSFIELD, MA; (DEP SE 211-1018) UNDER THE MANSFIELD PROTECTION BYLAW CHAPTER 220 JOEL BRANDWINE, MANSFIELD MUNICIPAL AIRPORT COMMISSION, 265 FRUIT STREET, MANSFIELD, MA; MANSFIELD MUNICIPAL AIRPORT FOR THE RECONSTRUCTION OF THE AIRPORT'S RUNWAY, TAXI WAY AND STUB TAXIWAYS, INCLUDE REGRADING OF AREAS IN ORDER TO COMPLY WITH FEDERAL AVIATION ADMINISTRATION GRADING CRITERIA ALONG THE STORMWATER MANAGEMENT IMPROVEMENTS WITHIN 100 FEET OF A BORDERING VEGETATED WETLAND AND 200-FOOT RIVERFRONT AREA OF WADING RIVER.: 1. RECORD ORDER NO WORK CAN BE STARTED UNTIL THE ORDER OF CONDITIONS HAS BEEN RECORDED WITH THE BRISTOL COUNTY REGISTRY OF DEEDS AND THE RECEIPT OF THE ORDER IS RETURNED TO THE COMMISSION FILLED IN BY THE REGISTRY. 2. PLAN OF RECORD ALL WORK MUST CONFORM TO THE PLAN DATED, REFERENCED AS ?THE PLAN OF RECORD? IN THIS ORDER. 3. LIMIT OF WORK ALL LIMITS OF WORK AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION, CLEARING, OR EXCAVATION. THE EROSION CONTROLS SHALL CONSIST OF A 8? DIAMETER BIODEGRADABLE MULCH-FILLED SILT SOCK WITH WOODEN STAKES EVERY 10 FEET ON EACH SIDES OF SOCK OR EQUIVALENT (DO NOT PIERCE SILT SOCK WITH STAKES). IN ADDITION TO THE SILT SOCK, TRENCHED-IN SILT FENCE MAY BE REQUIRED DEPENDING ON THE SPECIFIC SITE CONDITIONS. SEE THE CONSERVATION AGENT (AGENT) FOR SPECIFIC EROSION CONTROL DESIGN STANDARDS. THE APPLICANT SHALL NOTIFY THE AGENT WHEN ANY SUCH DEVICES OR MEASURES ARE INSTALLED SO THAT A SITE VISIT CAN BE CONDUCTED PRIOR TO THE COMMENCEMENT OF WORK. 4. ADDITIONAL MITIGATION THE COMMISSION RESERVES THE RIGHT TO REQUIRE ADDITIONAL MITIGATION OR EROSION CONTROL DEVICES OR MEASURES IF MITIGATION OR EROSION CONTROL DEVICES ARE NOT ADEQUATELY INSTALLED OR MAINTAINED ON SITE. 5. STABILIZATION THE APPLICANT SHALL ENSURE THAT ALL



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DEMARCATION (I.E. LIMITS OF WORK) AND EROSION CONTROL DEVICES WILL REMAIN IN PLACE AND BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL ALL DISTURBED AREAS ARE STABILIZED. STABILIZATION SHALL BE ACHIEVED ONCE A COMPLETE VEGETATIVE COVER IS REACHED. SEEDED AREAS SHALL BE COVERED WITH A SUITABLE PROTECTIVE COVER TO ALLOW THE SEED TO GERMINATED AND BECOME ESTABLISHED. ALL SIDE SLOPES GREATER THAN 3:1 (BUT LESS THAN 2:1) ARE TO BE COVERED WITH JUTE MESH AND SEEDED. AT NO POINT SHALL EROSION OCCUR RESULTING IN SEDIMENT ENTERING THE WETLAND AREAS. IF EROSION OCCURS, THE AGENT IS TO BE CONTACTED TO REVIEW THE EXTENT OF THE EROSION AND DETERMINE FOLLOW-UP ACTIONS. 6. ROOF RUNOFF ALL ROOF RUNOFF IS TO BE DIRECTED IN TO DRYWELLS OR EQUIVALENT DRAINAGE COMPONENTS APPROVED BY THE COMMISSION. THE COMMISSION OR ITS AGENT SHALL REVIEW THE LOCATIONS OF THE DRYWELLS. 7. CONSTRUCTION SEQUENCE A CONSTRUCTION SEQUENCE IS TO BE SUBMITTED TO THE COMMISSION PRIOR TO THE START OF WORK. 8. START WORK NOTIFICATION THE CONSERVATION COMMISSION OR ITS AGENT IS TO BE NOTIFIED OF THE STARTING DATE OF THE WORK PRIOR TO ITS COMMENCEMENT. 9. PRE-CONSTRUCTION MEETING PRIOR TO THE COMMENCEMENT OF WORK, A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE AGENT, THE ENGINEER AND/OR REPRESENTATIVE, AND THE GENERAL CONTRACTOR TO REVIEW THE ORDER OF CONDITIONS, SCOPE OF WORK AND CONSTRUCTION SEQUENCING. 10. OOC ON-SITE THE APPLICANT SHALL BE RESPONSIBLE TO ENSURE THAT ALL CONTRACTORS ON SITE DURING THE CONSTRUCTION HAVE RECEIVED AND REVIEWED THE ORDER OF CONDITIONS AND ALL PLANS OF RECORD. 11. WETLAND FLAGGING WETLAND FLAGGING MUST REMAIN IN PLACE UNTIL THE PROJECT HAS BEEN COMPLETED AND THE CERTIFICATE OF COMPLIANCE ISSUED. 12. COC WITH AS-BUILT THE CERTIFICATE OF COMPLIANCE SHALL BE REQUESTED IN WRITING UPON COMPLETION OF THE PROJECT. AT THE SAME TIME, THE APPLICANT OR ANY SUCCESSOR SHALL, UPON COMPLETION OF THE PROJECT; SUBMIT AN AS-BUILT PLAN AND LETTER SIGNED BY A PROFESSIONAL ENGINEER, CERTIFYING THAT THE WORK HAS BEEN DONE IN ACCORDANCE WITH THE APPROVED PLAN. 13. REVISIONS TO BE REVIEWED ANY MODIFICATIONS OR REVISIONS TO THE PLAN(S) REFERENCED IN THIS ORDER MUST BE SUBMITTED TO THE COMMISSION FOR REVIEW. FOR SINGLE FAMILY LOTS, THIS ORDER IS FOR THE STRUCTURES SHOWN ON THE PLAN OF RECORD ONLY. ANY ADDITIONAL STRUCTURES INCLUDING, BUT NOT LIMITED TO, DECKS, PATIOS, SHEDS, POOLS, WALKWAYS AND/OR ANY HARDSCAPE FEATURES MUST BE REVIEWED BY THE COMMISSION. IF, AFTER THEIR REVIEW, THE COMMISSION FINDS THAT THE CHANGES ARE NOT SIGNIFICANT ENOUGH (MINOR MODIFICATIONS) TO WARRANT AN AMENDED ORDER OR NEW NOTICE OF INTENT, THEN THE REVISED PLANS SHALL BE CONSIDERED THE NEW PLAN OF RECORD. IF THE CHANGES ARE SIGNIFICANT ENOUGH TO WARRANT AN AMENDED ORDER OR NEW NOTICE OF INTENT, THEN THE APPLICANT IS REQUIRED TO FILE ACCORDINGLY. 14. NO SYNTHETIC CHEMICALS NO SYNTHETIC FERTILIZER, HERBICIDES, PESTICIDES OR FUNGICIDES CAN BE USED; ONLY ORGANIC PRODUCTS MAY BE USED. 15. STORMWATER O&M ALL THE TERMS AND CONDITIONS SET FORTH IN THE STORMWATER MANAGEMENT PLAN FOR (PROJECT TITLE) PREPARED BY (ENGINEER), SUBMITTED ON (DATE) ARE TO BE INCLUDED WITH THIS ORDER OF CONDITIONS. ALL ON-GOING O&M PLAN ACTIVITIES ARE TO BE RECORDED AS NOTED. ALL REPORTS AND CHECKLIST ARE TO BE SUBMITTED TO THE COMMISSION AS NOTED. 16. DUMPING OF LAWN CLIPPINGS IS PROHIBITED DUMPING OF LAWN CLIPPINGS AND/OR YARD DEBRIS INTO A WETLAND AND/OR 25-FOOT NO DISTURB ZONE IS PROHIBITED. STORAGE IS PROHIBITED IN THESE AREAS AS WELL. SPECIAL CONDITIONS: IF ALLOWABLE CONSULTANT TO WORK WITH AGENT TO ESTABLISH BUFFER STRIP ALONG THE NORTH SIDE OF THE DRAINAGE SWALE/BVW WITH AN HERBACEOUS SEED MIX, TO BE MOWED ON AN ANNUAL BASIS.



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eDEP Transaction #:1893138
City/Town:MANSFIELD

E. Signatures

This Order is valid for three years from the date of issuance, unless otherwise specified pursuant to General Condition #4. If this is an Amended Order of Conditions, the Amended Order expires on the same date as the original Order of Conditions.

5/5/2025

1. Date of Original Order

Please indicate the number of members who will sign this form. This Order must be signed by a majority of the Conservation Commission.

5

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Ryan O'Hara

Michael Healey

Laura Konick

Aaron Roth

Aaron Gallagher

☐ by hand delivery on

☐ by certified mail, return receipt requested, on

Date

Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

G. Recording Information

This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land



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subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

MANSFIELD

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

MANSFIELD

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

265 FRUIT STREET *

Project Location

211-1018

MassDEP File Number

Has been recorded at the Registry of Deeds of:

<u>County</u>	<u>Book</u>	<u>Page</u>
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for:

Property Owner SHERMAN COX

and has been noted in the chain of title of the affected property in:

<u>Book</u>	<u>Page</u>
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In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

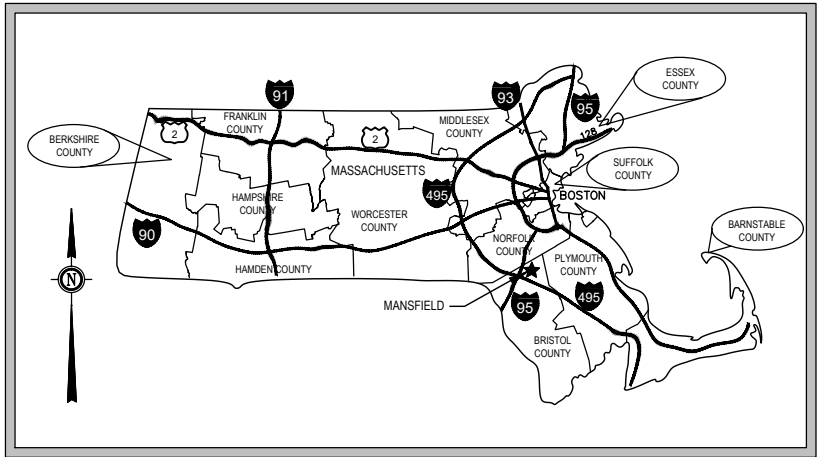
Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Rev. 4/1/2010

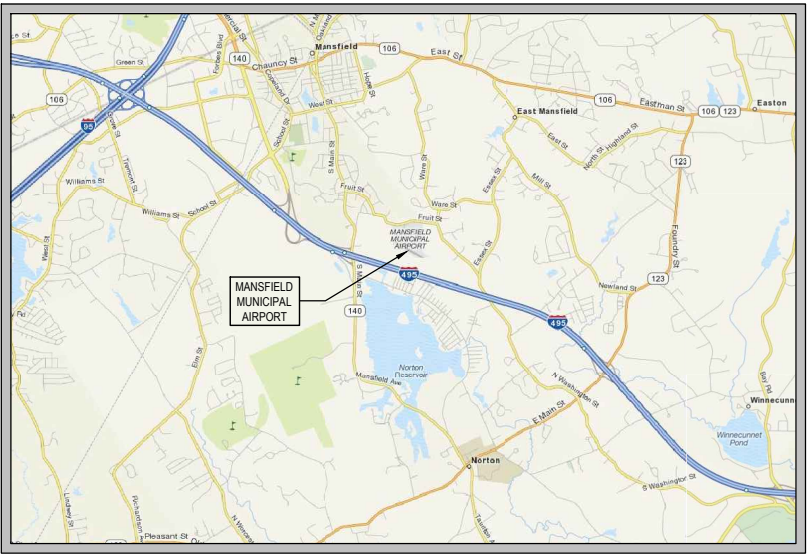


LOCATION MAP

30 0 30 60
SCALE IN MILES

TOWN OF MANSFIELD MASSACHUSETTS

MANSFIELD MUNICIPAL AIRPORT



VICINITY MAP
N.T.S.

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT

PLAN OF RECORD
Received 3/13/25

AIP NO. 3-25-0028-041-2024

MARCH 2025

DESIGN STANDARDS	
DESIGN AIRCRAFT	PIPER NAVAJO CHIEFTAIN PA-31-350
AIRPORT REFERENCE CODE (ARC)	B-I (SMALL)
TAXIWAY DESIGN GROUP (TDG)	TDG-1A
DESIGN LOAD	29,000 LBS (GROSS) SRE
RUNWAY 14-32 LENGTH	3,501 FT
RUNWAY 14-32 WIDTH	75 FT
RUNWAY SAFETY AREA (RSA) WIDTH	120 FT
RUNWAY OBJECT FREE AREA (ROFA) WIDTH	250 FT
NOMINAL TAXIWAY WIDTH	25 FT
NOMINAL TAXIWAY SAFETY AREA (TSA) WIDTH	49 FT
NOMINAL TAXIWAY OBJECT FREE AREA (TOFA) WIDTH	89 FT
RUNWAY 14 APPROACH TYPE	VISUAL
RUNWAY 32 APPROACH TYPE	NON-PRECISION

<div>TOWN OF MANSFIELD, MASSACHUSETTS MANSFIELD MUNICIPAL AIRPORT</div> <div>APPROVED _____ DATE _____ <div>MR. JOEL BRANDWINE - CHAIR MANSFIELD AIRPORT COMMISSION</div></div> <div>APPROVED _____ DATE _____ <div>MR. KEVIN BULLOCK, AIRPORT MANAGER</div></div>	<div>ENGINEER'S STATEMENT REGARDING COMPLIANCE</div> <div>THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED TO THE BEST OF MY KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH THE LIST OF CURRENT FAA ADVISORY CIRCULARS FOR AIP PROJECTS PROVIDED BY THE FAA IN A LETTER DATED NOVEMBER 17, 2022. KNOWN DEVIATIONS FROM FAA STANDARDS WERE APPROVED BY FAA IN LETTERS DATED NONE AND ARE DISCUSSED IN THE PROJECT ENGINEERING REPORT AND/OR OTHER OFFICIAL PROJECT DOCUMENTS.</div> <div><div>BY _____ DATE _____</div><div>MARK K. OTTARIANO, P.E. GALE ASSOCIATES, INC.</div></div> <div></div>	<div>MAJOR ITEM QUANTITIES</div> <table><thead><tr><th>ITEM</th><th>DESCRIPTION</th><th>QUANTITY</th></tr></thead><tbody></tbody></table>	ITEM	DESCRIPTION	QUANTITY	<div>PREPARED BY</div> <div> Connecticut Florida Maine Maryland Massachusetts New Hampshire Virginia</div> <div>Gale Associates, Inc. Engineers & Planners 6 Bedford Farms Drive, Suite 101 Bedford, NH 03110 P 603.471.1887 F 603.471.1809 www.gainc.com</div> <div>NOI SUBMISSION</div> <div><div>DRAWING NO.</div><div>G1.1</div><div>1 OF 17</div></div>
ITEM	DESCRIPTION	QUANTITY				

GENERAL NOTES:

AIRPORT OPERATIONS COORDINATOR

1. THE SPONSOR SHALL PROVIDE AN OPERATIONS COORDINATOR WHO SHALL HAVE THE AUTHORITY TO OPEN AND CLOSE FACILITIES, ISSUE AND CANCEL NOTAM'S AND TO COORDINATE WITH AIRPORT USERS. FOR THE PURPOSES OF THIS PROJECT, THE AIRPORT MANAGER, MR. KEVIN BULLOCK SHALL BE THE DESIGNATED AIRPORT OPERATIONS COORDINATOR. PHONE: 508-930-1121.

AIRPORT SECURITY

1. THE CONTRACTOR SHALL COMPLY WITH ALL AIRPORT SECURITY REQUIREMENTS AS DIRECTED BY THE AIRPORT OPERATIONS COORDINATOR.
2. NO CONTRACTOR OR CONTRACTOR'S PERSONNEL WILL BE ALLOWED TO OPERATE ANY VEHICLE WITHIN THE AIRPORT'S ACTIVE MOVEMENT AREAS WITHOUT PROPER TRAINING FROM THE AIRPORT OPERATIONS COORDINATOR. ANY PERSONNEL PERMITTED TO OPERATE VEHICLES SHALL BE COMPETENT AND TRAINED IN AIRFIELD DRIVING PRACTICES. DRIVERS WILL BE ASSIGNED A CALL SIGN FROM THE AIRPORT OPERATIONS COORDINATOR, AND SHALL MONITOR THE AIRPORT GROUND COMMUNICATIONS FREQUENCY (123.00MHz) AT ALL TIMES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING ACCESS TO AND FROM THE WORK AREAS AND ENSURING THAT AIRPORT SECURITY IS MAINTAINED AT ALL TIMES. THIS SHALL INCLUDE BUT NOT BE LIMITED TO CONTROLLING ACCESS THROUGH AIRPORT GATES. NO GATE SHALL BE LEFT OPEN AND UNLOCKED UNLESS A GATE GUARD IS STATIONED AT THE GATE. FINES OF UP TO \$10,000.00 OR MORE CAN BE IMPOSED FOR SECURITY VIOLATIONS AND INCURSIONS INTO ACTIVE AIRCRAFT OPERATION AREAS. THE CONTRACTOR SHALL PAY ALL FINES ASSESSED AGAINST THE AIRPORT DUE TO VIOLATIONS CAUSED BY THE CONTRACTOR, CONTRACTOR'S PERSONNEL, SUBCONTRACTORS AND VENDORS.
4. PARKING OF PERSONAL VEHICLES SHALL BE IN DESIGNATED LOCATIONS ONLY. THE CONTRACTOR AS A SUBSIDIARY OBLIGATION, SHALL PROVIDE ADEQUATE AND SAFE TRANSPORTATION FOR THEIR EMPLOYEES BETWEEN PARKING AREAS AND THE WORK SITE. DRIVERS OF WORK VEHICLES WILL BE INSTRUCTED THAT THEIR MOVEMENTS ARE CONFINED TO THE DESIGNATED HAULING AND ACCESS ROUTES AND WILL BE CAUTIONED THAT UNAUTHORIZED DEVIATIONS FROM THESE DESIGNATED ROUTES OR INCURSIONS INTO ACTIVE AIRCRAFT OPERATION AREAS MAY LEAD TO THEIR ARREST AND SUBSEQUENT PAYMENT OF FINES.
5. THE CONTRACTOR SHALL INSTRUCT SUPPLIERS REGARDING ACCESS PROCEDURES TO BE FOLLOWED WHILE DELIVERING MATERIALS TO THE SITE. THE CONTRACTOR SHALL DESIGNATE AN ESCORT FOR ALL DELIVERIES THAT HAS RECEIVED TRAINING ON AIRFIELD GROUND MOVEMENTS. THE ESCORT SHALL REMAIN WITH THE DELIVERY DRIVER/CREW FOR THE ENTIRE DELIVERY AND MAY NOT LEAVE THE DELIVERY DRIVER/CREW UNTIL THEY HAVE SAFELY BEEN ESCORTED OFF AIRPORT PROPERTY.
6. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER AND THE SPONSOR WITHIN 10 DAYS AFTER SIGNING OF THE CONTRACT, AND PRIOR TO THE START OF WORK, A WRITTEN SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) DETAILING PRECAUTIONS THEY PROPOSE FOR THE CONTROL OF VEHICLE TRAFFIC INCLUDING FLAG PERSONS, SIGNS, BARRICADES, ESCORTS AND ANY OTHER MEASURES PROPOSED. FOR MORE INFORMATION SEE SPECIFICATION M-001. AFTER REVIEW AND COMMENT ON THE CONTRACTOR'S OPERATING PROCEDURES BY THE ENGINEER AND SPONSOR, THE CONTRACTOR SHALL FOLLOW THEM EXPLICITLY. THE SPONSOR MAY CLOSE ANY WORK AREA(S) ANY TIME THIS PLAN HAS BEEN VIOLATED. CLOSURE OF ANY WORK AREA(S) BY THE SPONSOR FOR THIS REASON SHALL NEITHER CONSTITUTE A VALID REASON FOR EXTENDING THE CONTRACT TIME, NOR SHALL IT BE GROUNDS FOR ANY CLAIM FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR.
7. ALL SECURITY ARRANGEMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE AIRPORT OPERATIONS COORDINATOR.

AIRCRAFT OPERATION AREAS

1. IN GENERAL THE WORK ASSOCIATED WITH THIS PROJECT WILL REQUIRE THE CONTRACTOR TO BE INSIDE THE AIRCRAFT OPERATIONS AREA (AOA). THE AOA IS ANY AREA THAT THE AIRPORT USES FOR LANDING, TAKEOFF, OR SURFACE MANEUVERING OF AIRCRAFTS WHICH INCLUDES THE REQUIRED SAFETY AREAS.
2. THE CONTRACTOR SHALL KEEP HIS PERSONNEL AND EQUIPMENT AT LEAST 125 FEET FROM THE CENTERLINE OF THE ACTIVE RUNWAY FOR THE TAKE-OFFS AND LANDINGS OF ALL AIRCRAFT AND AT LEAST 44.5 FEET FROM THE CENTERLINE OF ACTIVE TAXIWAYS AND APRONS FOR AIRCRAFT MOVEMENTS UNLESS THE SPONSOR GRANTS SPECIFIC PERMISSION. IN ADDITION, NO EQUIPMENT WILL BE ALLOWED TO PENETRATE ACTIVE TAXIWAY/TAXILANE RESTRICTED CONSTRUCTION AREAS AS SHOWN ON THE SAFETY PLANS. THE SPONSOR MAY GRANT ACCESS TO SPECIFIC AREAS UPON WRITTEN REQUEST, HOWEVER, NO EQUIPMENT MAY BE LEFT UNATTENDED AND UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE LEFT OVERNIGHT IN ANY LOCATION OTHER THAN THE SPECIFIED STAGING AREAS.

OPEN TRENCHES AND EXCAVATIONS

1. THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE ANY OPEN TRENCHES OR EXCAVATIONS WITHIN THE ACTIVE AIRCRAFT OPERATIONS AREAS OVERNIGHT, ON WEEKENDS, OR AT OTHER TIMES WHEN THE CONTRACTOR IS NOT PRESENT AT THE WORK SITE. WORK HOURS AVAILABLE TO THE CONTRACTOR ARE MONDAY-SATURDAY 0700-1700. WORK ON SUNDAY WILL NOT BE ALLOWED, PER M-001. LOCAL WORK HOUR ORDINANCES SHALL ALSO APPLY. IN ADDITION, NO EXCAVATION EXCEEDING THREE (3) INCHES IN DEPTH SHALL BE LEFT OPEN WITHIN ANY ACTIVE AIRCRAFT OPERATION AREA UNLESS THE EXCAVATION IS COVERED WITH APPROVED STEEL PLATES. STEEL PLATES SHALL BE CAPABLE OF BEARING THE HEAVIEST AIRCRAFT/VEHICLE THAT MAY TAXI ACROSS THESE PLATES. THE CONTRACTOR SHALL KEEP THE LENGTH OF OPEN TRENCHES COVERED WITH STEEL PLATES TO A MINIMUM, BUT IN NO CASE SHALL THE LENGTH EXCEED 100 LINEAR FEET (100 FT). THE MAXIMUM ALLOWABLE TRENCH WIDTH COVERED BY A STEEL PLATE SHALL BE DETERMINED BY THE CONTRACTOR/STEEL PLATE MANUFACTURE TO ALLOW FOR SAFE PASSAGE OF THE HEAVIEST AIRCRAFT/VEHICLE THAT MAY TAXI ACROSS THESE PLATES.
2. ALL EXCAVATIONS, UNLESS COVERED BY STEEL PLATES, SHALL BE BACK FILLED, COMPACTED, AND HAVE THE PAVEMENT REPAIRED WITH ENOUGH TIME TO CURE PRIOR TO

REOPENING THE AREA TO AIRCRAFT OPERATIONS.

3. PRIOR TO THE END OF EACH WORK DAY, THE CONTRACTOR SHALL ENSURE THAT TURF AREAS WITHIN ANY AIRCRAFT OPERATION AREA ARE GRADED AWAY FROM PAVEMENTS AT A MAXIMUM SLOPE OF 5% AND SHALL BE LEFT IN SUCH CONDITION THAT IT WILL DRAIN READILY AND EFFECTIVELY AND WILL NOT POSE A HAZARD TO VEHICLES OR AIRCRAFT. NO PILES OF SOIL OR OTHER MATERIALS SHALL BE LEFT UNSPREAD. NO SHARP CHANGES IN GRADE WILL BE PERMITTED, AND ALL MATERIALS SHALL BE THOROUGHLY COMPACTED.

DISPOSAL OF SURPLUS AND UNSUITABLE WASTE MATERIALS

1. ALL EXCAVATED OR GENERATED SURPLUS MATERIAL AND UNSUITABLE MATERIAL INCLUDING BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE, EXCAVATED MATERIALS, PIPES, STRUCTURES, AND OTHER WASTE MATERIALS SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR OFF AIRPORT PROPERTY UNLESS SPECIFIC INSTRUCTIONS TO THE CONTRARY HAVE BEEN GIVEN TO THE CONTRACTOR BY THE SPONSOR/ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE DISPOSAL OF SURPLUS AND UNSUITABLE CONSTRUCTION MATERIALS OFF AIRPORT PROPERTY.
2. NO SEPARATE MEASUREMENT FOR PAYMENT WILL BE MADE FOR THE DISPOSAL, RATHER, IT SHALL BE CONSIDERED INCIDENTAL TO THE PAYMENT ITEM THAT GENERATES THE MATERIAL TO BE DISPOSED OF.
3. ANY CONTAMINATED SOIL SHALL BE CONSIDERED UNSUITABLE SURPLUS EXCAVATED MATERIAL AND SHALL BE LEGALLY DISPOSED OF OFF SITE. THE EXCAVATION, REMEDIATION AND DISPOSAL OF CONTAMINATED SOIL WILL BE PAID FOR BY CHANGE ORDER.

UNDERGROUND UTILITIES AND CABLES

1. THE APPROXIMATE LOCATIONS OF KNOWN UTILITIES AND UNDERGROUND CABLES ARE SHOWN ON THE PLANS. PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COORDINATE ALL WORK ON, AND IN THE VICINITY OF THE UNDERGROUND UTILITIES AND CABLES WITH THE FOLLOWING AGENCIES AS APPROPRIATE:
- DIG SAFE AND INDICATED UTILITIES
 - THE FAA - AIRWAY FACILITIES SECTOR FIELD OFFICE
 - TOWN OF MANSFIELD DEPARTMENT OF PUBLIC WORKS (WATER & SEWER)
 - TOWN OF NORTON WATER/SEWER DEPARTMENT
 - TOWN OF NORTON HIGHWAY DEPARTMENT
 - TOWN OF MANSFIELD FIRE DEPARTMENT
 - EVERSOURCE ENERGY (OR CURRENT GAS COMPANY)
 - MANSFIELD MUNICIPAL ELECTRIC
 - COMCAST (OR CURRENT CABLE COMPANY)
 - VERIZON COMMUNICATIONS (OR CURRENT TELEPHONE COMPANY)
 - AT&T
 - MANSFIELD MUNICIPAL AIRPORT - MAINTENANCE DEPARTMENT
2. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES IN THE PROJECT AREA, NOT LIMITED TO THOSE LISTED ABOVE, AND ADJUSTING THEIR WORK METHODS TO AVOID EFFECTING THOSE UTILITIES.
3. THE CONTRACTOR SHALL REPAIR, AT THEIR OWN EXPENSE ANY UNDERGROUND OR OVERHEAD UTILITIES DAMAGED BY THEIR OPERATIONS AT NO ADDITIONAL COST TO THE SPONSOR. THIS INCLUDES DAMAGE DONE BY DRIVING EQUIPMENT OVER EXISTING UNDERGROUND CABLES OR UTILITIES. THE REPAIR OF NON-FAA OWNED UTILITIES SHALL BE INSPECTED AND APPROVED BY THE SPONSOR UNLESS IF THE UTILITIES ARE OWNED BY THE UTILITY COMPANIES ABOVE. THE REPAIR OF FAA CABLES SHALL BE INSPECTED AND APPROVED BY THE FAA.
4. THE CONTRACTOR SHALL COMPLY WITH THE CURRENT VERSION OF THE DIG SAFE LAW. THE CONTRACTOR IS REQUIRED TO PRE-MARK THE CONSTRUCTION SITE AND GIVE NOTICE OF PLANNED DIGGING NEAR ANY UTILITY, CABLE OR OTHER INFRASTRUCTURE.
5. THERE ARE ELECTRICAL, WATER, SEWER, DRAINAGE AND OTHER UTILITIES KNOWN TO EXIST IN THE PROJECT AREA. PARTICULAR CARE SHALL BE TAKEN TO AVOID THESE FACILITIES.

6. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS NECESSARY TO PROTECT THE EXISTING UNDERGROUND UTILITIES AND CABLES THAT ARE TO REMAIN, AND TO MAKE ANY TEMPORARY CONNECTIONS NECESSARY TO MAINTAIN OPERATIONS OF THE UNDERGROUND UTILITIES AND CABLES THAT ARE IMPACTED UNTIL THE PERMANENT REPAIRS CAN BE MADE.

CONTRACTOR STAGING AND MATERIAL STORAGE AREA

1. THE LOCATION OF THE CONTRACTOR'S FIELD OFFICE AND THE STAGING AND MATERIAL STORAGE AREA ARE LOCATED AS SHOWN IN THE SAFETY AND PHASING PLANS. ANY ACTIVITIES IN THESE AREAS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
2. THE CONTRACTOR WILL BE PERMITTED TO STORE EQUIPMENT NEEDED FOR THE IMMEDIATE WORK ON HAND WITHIN THE WORK AREA(S) WITH THE APPROVAL OF THE AIRPORT OPERATIONS COORDINATOR. EQUIPMENT NOT IN USE, OR NOT BEING USED REGULARLY SHALL BE RETURNED TO THE APPROPRIATE STAGING AREA. ALL EQUIPMENT BOOMS SHALL BE LOWERED AT THE CLOSE OF EACH DAY'S WORK OR WHEN STORED. ALL EQUIPMENT SHALL BE PARKED IN THE STAGING AREA(S) AT THE CLOSE OF WORK EACH DAY AND WHENEVER IT IS NOT IN USE OR NOT BEING REGULARLY USED.
3. THE CONTRACTOR (AND THEIR SUBCONTRACTORS) SHALL PROVIDE ALL NECESSARY TEMPORARY FENCING, GATES OR OTHER MATERIALS TO PROTECT THEIR MATERIALS AND EQUIPMENT FROM PILFERAGE AND VANDALISM. THE SPONSOR WILL NOT BE RESPONSIBLE FOR VANDALIZED CONTRACTOR EQUIPMENT OR MATERIALS STORED ON AIRPORT PROPERTY.
4. ANY AREA OCCUPIED BY THE CONTRACTOR SHALL BE MAINTAINED IN A CLEAN AND ORDERLY CONDITION SATISFACTORY TO THE ENGINEER AND AIRPORT OPERATIONS COORDINATOR. PARTICULAR ATTENTION SHALL BE GIVEN TO THE ELIMINATION OF COMBUSTIBLE RUBBISH OR DEBRIS THAT HAS THE POTENTIAL OF BECOMING FOD. IN THESE AREAS, RUBBISH OR DEBRIS SHALL NOT BE LEFT EXPOSED OVERNIGHT OR DURING PERIODS OF WORK STOPPAGE.
5. AT THE COMPLETION OF THE CONTRACT, ALL CONTRACTOR'S AND SUBCONTRACTOR'S FACILITIES WILL BE REMOVED PROMPTLY AND IN A WORKMANLIKE MANNER. THE AREA SHALL BE RESTORED TO IT'S ORIGINAL CONDITION OR BETTER AND LEFT CLEAN AND FREE OF ALL DEBRIS OR SURPLUS MATERIAL AT NO ADDITIONAL COST TO THE SPONSOR. ALL WORK ASSOCIATED WITH THE CREATION, USE AND RESTORATION OF THE CONTRACTOR'S STAGING, VEHICLE PARKING, AND EQUIPMENT STORAGE AREAS SHALL BE INCIDENTAL TO THE PROJECT AND SHALL NOT BE MEASURED OR PAID FOR SEPARATELY.

WETLANDS

1. DISTURBANCE OF WETLANDS IS A POTENTIAL VIOLATION OF FEDERAL, STATE AND LOCAL REGULATIONS. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID ANY UNAUTHORIZED DISTURBANCE OF WETLANDS AS PART OF THEIR WORK. THIS INCLUDES ANY DISCHARGE FROM CONSTRUCTION ACTIVITIES, DEWATERING, PUMPING, WASHING, AND ANY OTHER WORK WHICH MAY RESULT IN SEDIMENTATION. PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL CLEARLY MARK ANY WETLANDS SHOWN ON THE PLANS WHICH ARE ADJACENT TO THE WORK AREA(S) WITH CONSTRUCTION FENCE, SILT FENCE OR SIMILAR MEANS ACCEPTABLE TO THE ENGINEER. THE CONTRACTOR SHALL PAY ANY FINES ASSESSED AGAINST THE AIRPORT RELATED EXPENSES DUE TO VIOLATIONS CAUSED BY THE CONTRACTOR AND THEIR PERSONNEL, SUBCONTRACTORS, VENDORS AND SUPPLIERS.
2. NO FUELING OR MAINTENANCE OF EQUIPMENT OR TOOLS WILL BE PERMITTED IN WETLANDS, WETLANDS BUFFERS, OR IN RIVERS PROTECTION BUFFERS.

SURVEY

1. TOPOGRAPHIC AND DETAIL INFORMATION WAS BASED UPON AN ON THE GROUND SURVEY PREFORMED BY MERRILL ENGINEERS AND LAND SURVEYORS DURING SEPTEMBER AND OCTOBER OF 2024. A PORTION OF BASE PLAN INFORMATION WAS ALSO COMPILED FROM EXISTING INFORMATION PROVIDED BY THE MANSFIELD MUNICIPAL AIRPORT.

INDEX TO DRAWINGS

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6 OF 17	D1.3	DEMOLITION PLAN (SHEET 3 OF 3)
7 OF 17	C1.1	GEOMETRY PLAN (SHEET 1 OF 3)
8 OF 17	C1.2	GEOMETRY PLAN (SHEET 2 OF 3)
9 OF 17	C1.3	GEOMETRY PLAN (SHEET 3 OF 3)
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14 OF 17	C4.2	DRAINAGE AND EROSION CONTROL DETAILS (SHEET 2 OF 2)
15 OF 17	R1.1	MANSFIELD RESOURCE AREA PLAN (SHEET 1 OF 2)
16 OF 17	R1.2	MANSFIELD RESOURCE AREA PLAN (SHEET 2 OF 2)
17 OF 17	R2.1	NORTON RESOURCE AREA PLAN



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PROJECT
RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT

OWNER
MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-02-G12		
DESIGNED BY	JJS		
DRAWN BY	JJS		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	N.T.S.		

GRAPHIC SCALE



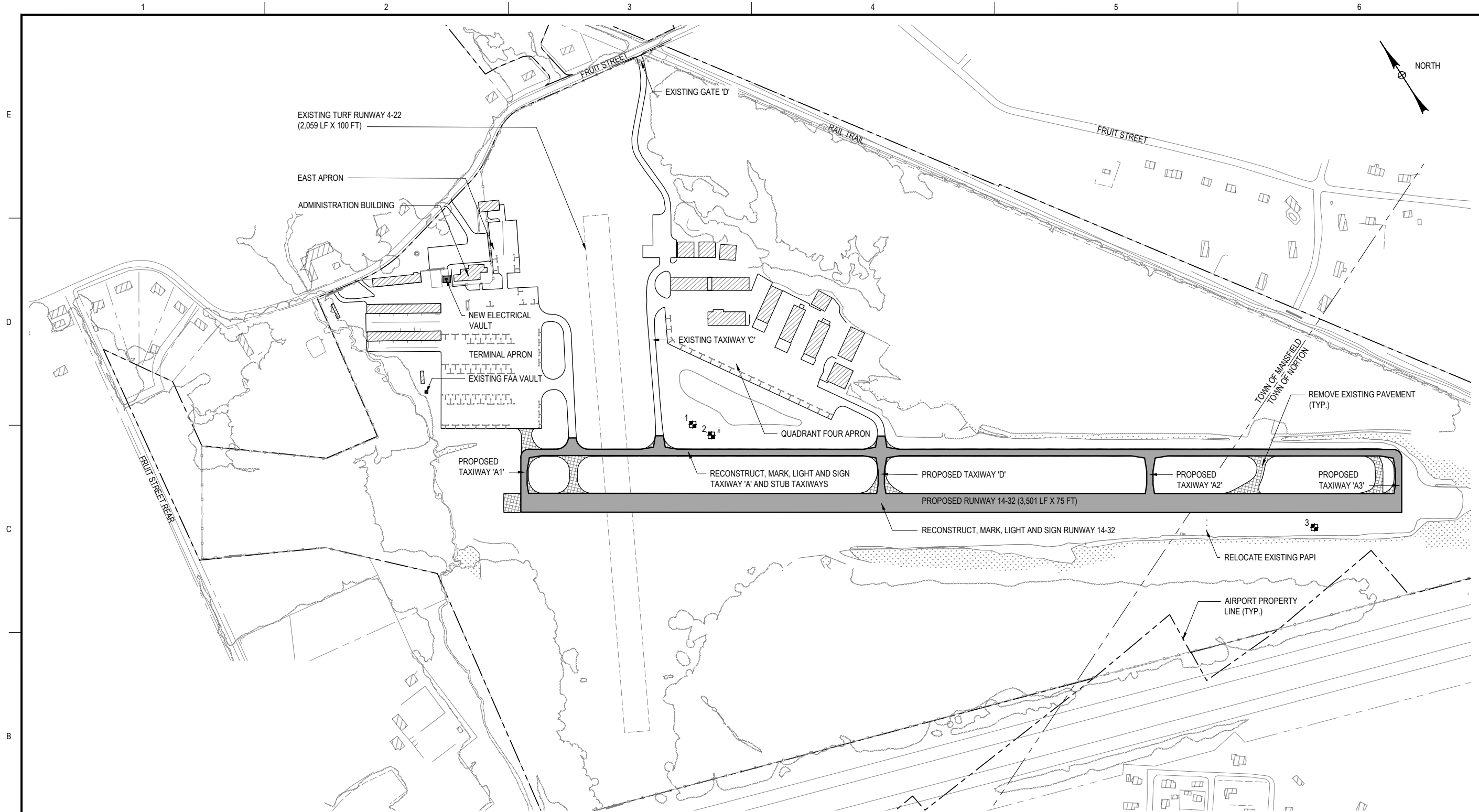
NOT TO SCALE

SHEET TITLE

INDEX TO
DRAWINGS,
GENERAL NOTES
AND
ABBREVIATIONS

DRAWING NO.

G1.2



SURVEY CONTROL NOTES:

- 1. SURVEY CONTROL POINTS HAVE BEEN PROVIDED TO ASSIST THE CONTRACTOR IN ESTABLISHING HORIZONTAL AND VERTICAL CONTROL FOR THE LAYOUT OF WORK ON THIS PROJECT.
- 2. THE CONTRACTOR SHALL VERIFY AND MAINTAIN ALL SURVEY CONTROL POINTS DURING CONSTRUCTION. ALL WORK TO ENSURE SURVEY POINTS ARE MAINTAINED SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT.
- 3. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL LOCATE AND CONFIRM THE LOCATIONS AND ELEVATIONS OF THE CONTROL POINTS SHOWN IN THE SURVEY CONTROL TABLE. ANY DISCREPANCIES BETWEEN THE LISTED DATA AND THE CONTRACTORS MEASUREMENTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO THE START OF CONSTRUCTION.
- 4. IF ANY PACS OR SACS SURVEY CONTROL POINTS ARE DISTURBED BY THE CONTRACTOR OR THEIR AGENTS THEY MUST BE REPAIRED PRIOR TO FINAL PROJECT CLOSEOUT. POINTS SHALL BE INSTALLED TO THE SATISFACTION OF THE ENGINEER AND SHALL MEET ALL APPLICABLE NOAA STANDARDS FOR SURVEY CONTROL POINTS.
- 5. ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.

GENERAL PLAN

SCALE: 1" = 200'

LEGEND

- AIRPORT PROPERTY LINE
- TOWN LINE
- PROPOSED PAVEMENT AREA
- PAVEMENT REMOVAL
- EXISTING BUILDINGS
- EXISTING PAVEMENT
- WETLANDS
- PACS/SACS SURVEY MONUMENT

PROJECT SUBCONSULTANTS

FIELD SURVEY:	MERRILL ENGINEERS AND LAND SURVEYORS 427 COLUMBIA ROAD HANOVER, MA 02339	(781) 826-9200
GEOTECH:	R.W. GILLESPIE & ASSOCIATES, INC. 20 POMERLEAU STREET, SUITE 100 BIDDEFORD, ME 04005	(207) 286-8008
ENVIRONMENTAL:	GZA GEOENVIRONMENTAL, INC. 1350 MAIN STREET, SUITE 1400 SPRINGFIELD, MA 01103	(413) 726-2100

SURVEY CONTROL TABLE

POINT NUMBER	NORTHING	EASTING	ELEV.	DESCRIPTION
1	2,826,017.13	737,911.50	122.40	DISK MY0465 (NAD83, NAVD88)
2	2,825,941.79	737,951.00	121.3	SACS - MY5414 (NAD83, NAVD88)
3	2,824,349.29	739,778.82	116.8	PACS - LW5147 (NAD83, NAVD88)



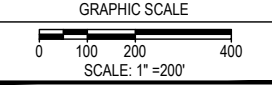
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OWNER
MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-03-GENER.		
DESIGNED BY	DCQ		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=200'		



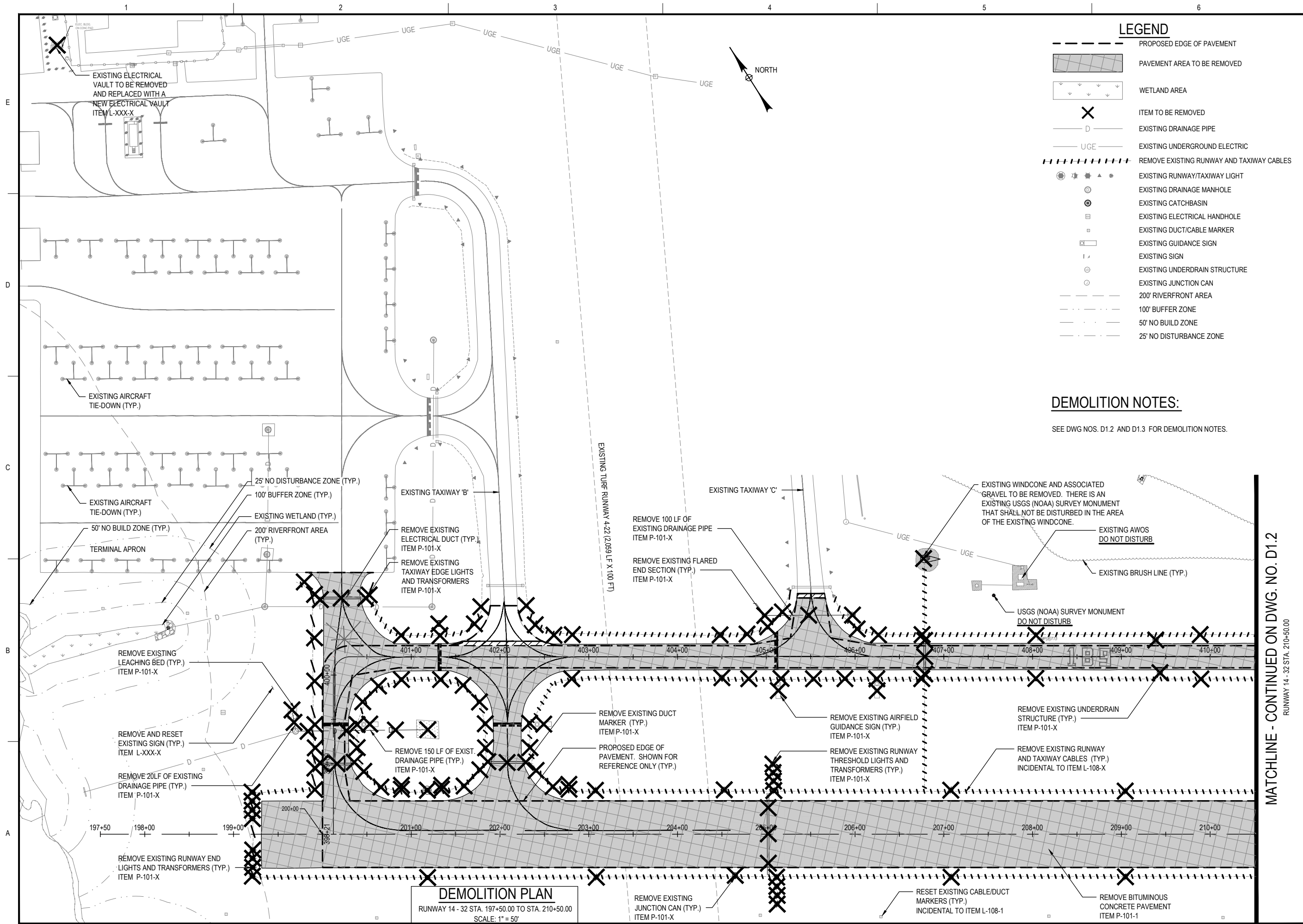
SHEET TITLE

GENERAL PLAN

DRAWING NO.

G1.3

3 OF 17



DEMOLITION NOTES:

SEE DWG NOS. D1.2 AND D1.3 FOR DEMOLITION NOTES.

MATCHLINE - CONTINUED ON DWG. NO. D1.2
RUNWAY 14 - 32 STA. 210+50.00



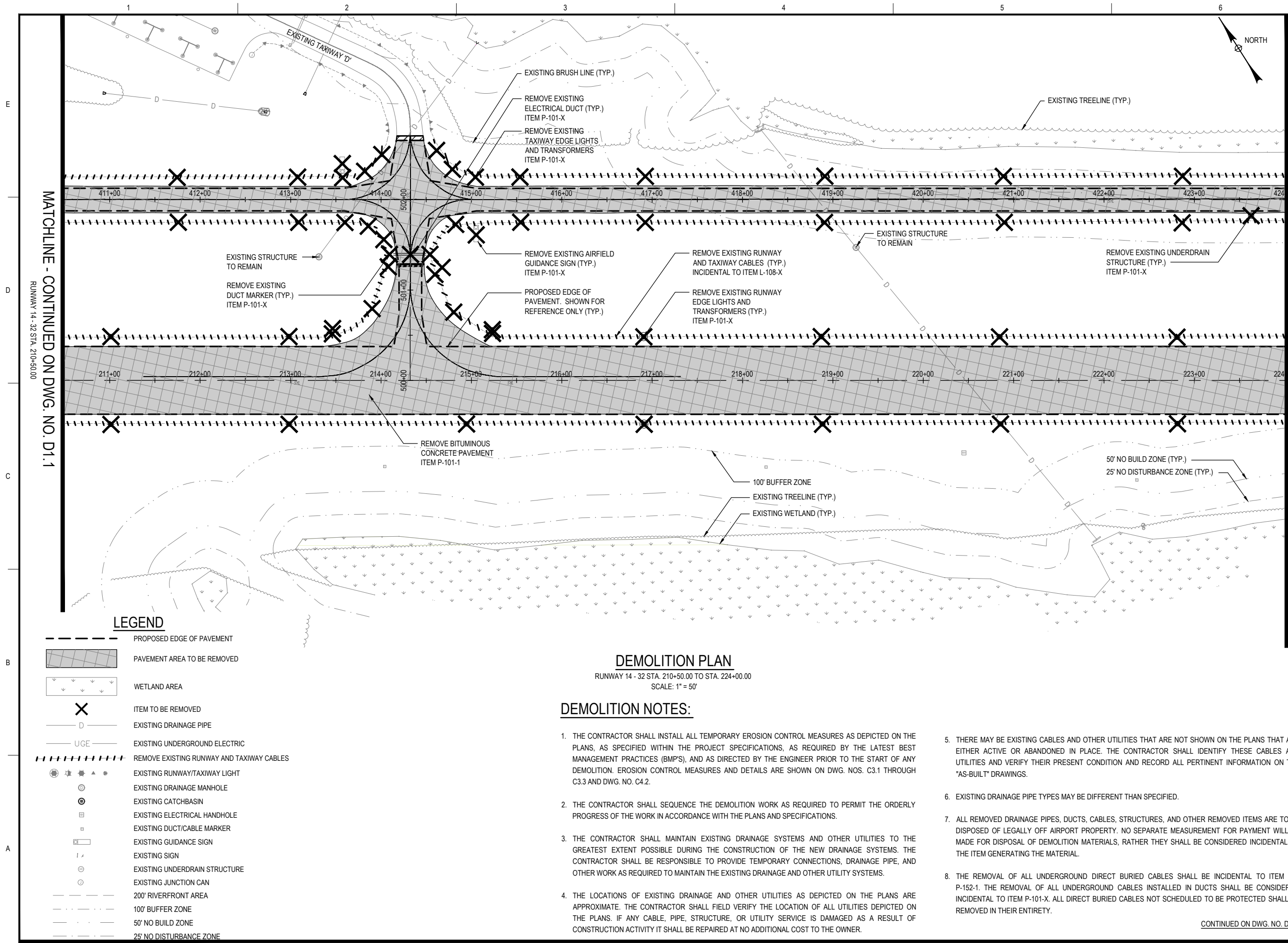
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PROJECT	RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT		
	OWNER		
OWNER	MANSFIELD MUNICIPAL AIRPORT		
	MANSFIELD, MASSACHUSETTS		

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-06-DEMO.		
DESIGNED BY	DCQ		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=50'		
GRAPHIC SCALE			
0 25 50 100 SCALE: 1"=50'			

SHEET TITLE	
DEMOLITION PLAN (SHEET 1 OF 3)	
DRAWING NO.	
D1.1	
4	OF 17



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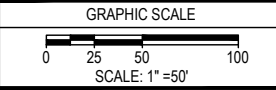
PROJECT

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT

OWNER

MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-07-DEMO.		
DESIGNED BY	DCQ		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=50'		



SHEET TITLE

DEMOLITION PLAN
(SHEET 2 OF 3)

DRAWING NO.

D1.2

5 OF 17

- DEMOLITION PLAN
RUNWAY 14 - 32 STA. 210+50.00 TO STA. 224+00.00
SCALE: 1" = 50'
- DEMOLITION NOTES:
1. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION CONTROL MEASURES AS DEPICTED ON THE PLANS, AS SPECIFIED WITHIN THE PROJECT SPECIFICATIONS, AS REQUIRED BY THE LATEST BEST MANAGEMENT PRACTICES (BMP'S), AND AS DIRECTED BY THE ENGINEER PRIOR TO THE START OF ANY DEMOLITION. EROSION CONTROL MEASURES AND DETAILS ARE SHOWN ON DWG. NOS. C3.1 THROUGH C3.3 AND DWG. NO. C4.2.

2. THE CONTRACTOR SHALL SEQUENCE THE DEMOLITION WORK AS REQUIRED TO PERMIT THE ORDERLY PROGRESS OF THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

3. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE SYSTEMS AND OTHER UTILITIES TO THE GREATEST EXTENT POSSIBLE DURING THE CONSTRUCTION OF THE NEW DRAINAGE SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY CONNECTIONS, DRAINAGE PIPE, AND OTHER WORK AS REQUIRED TO MAINTAIN THE EXISTING DRAINAGE AND OTHER UTILITY SYSTEMS.

4. THE LOCATIONS OF EXISTING DRAINAGE AND OTHER UTILITIES AS DEPICTED ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES DEPICTED ON THE PLANS. IF ANY CABLE, PIPE, STRUCTURE, OR UTILITY SERVICE IS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY IT SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.

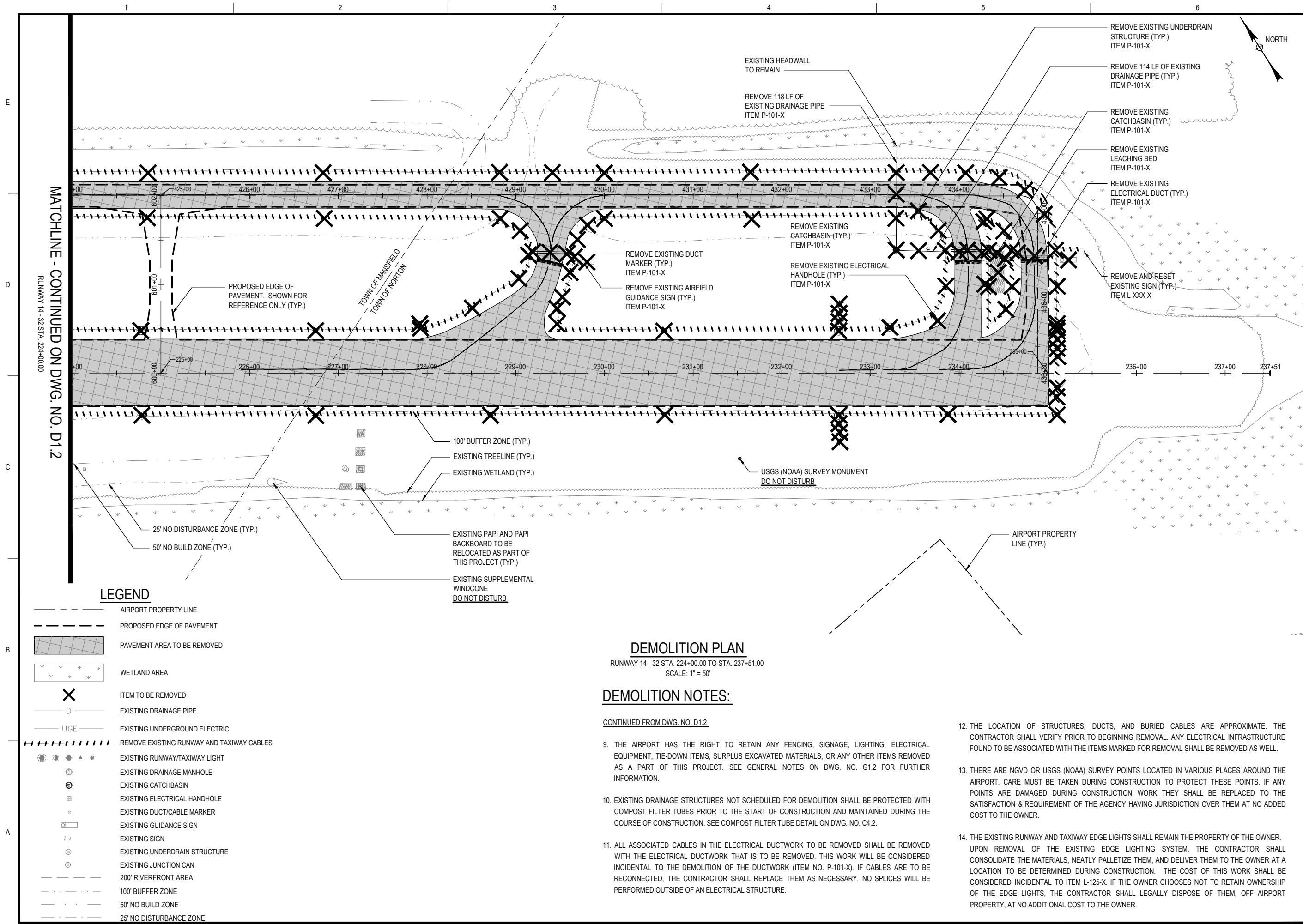
5. THERE MAY BE EXISTING CABLES AND OTHER UTILITIES THAT ARE NOT SHOWN ON THE PLANS THAT ARE EITHER ACTIVE OR ABANDONED IN PLACE. THE CONTRACTOR SHALL IDENTIFY THESE CABLES AND UTILITIES AND VERIFY THEIR PRESENT CONDITION AND RECORD ALL PERTINENT INFORMATION ON THE "AS-BUILT" DRAWINGS.


6. EXISTING DRAINAGE PIPE TYPES MAY BE DIFFERENT THAN SPECIFIED.

7. ALL REMOVED DRAINAGE PIPES, DUCTS, CABLES, STRUCTURES, AND OTHER REMOVED ITEMS ARE TO BE DISPOSED OF LEGALLY OFF AIRPORT PROPERTY. NO SEPARATE MEASUREMENT FOR PAYMENT WILL BE MADE FOR DISPOSAL OF DEMOLITION MATERIALS, RATHER THEY SHALL BE CONSIDERED INCIDENTAL TO THE ITEM GENERATING THE MATERIAL.

8. THE REMOVAL OF ALL UNDERGROUND DIRECT BURIED CABLES SHALL BE INCIDENTAL TO ITEM NO. P-152-1. THE REMOVAL OF ALL UNDERGROUND CABLES INSTALLED IN DUCTS SHALL BE CONSIDERED INCIDENTAL TO ITEM P-101-X. ALL DIRECT BURIED CABLES NOT SCHEDULED TO BE PROTECTED SHALL BE REMOVED IN THEIR ENTIRETY.

CONTINUED ON DWG. NO. D1.3





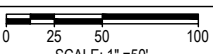
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PROJECT	RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT		
	OWNER		
MANSFIELD MUNICIPAL AIRPORT		MANSFIELD, MASSACHUSETTS	

NO.	DATE	DESCRIPTION	BY
PROJECT NO.		777141	
CADD FILE		777141-07-DEMO.	
DESIGNED BY		DCQ	
DRAWN BY		DCQ	
CHECKED BY		MKO	
DATE		MARCH 2025	
DRAWING SCALE		1"=50'	

GRAPHIC SCALE



SCALE: 1" = 50'

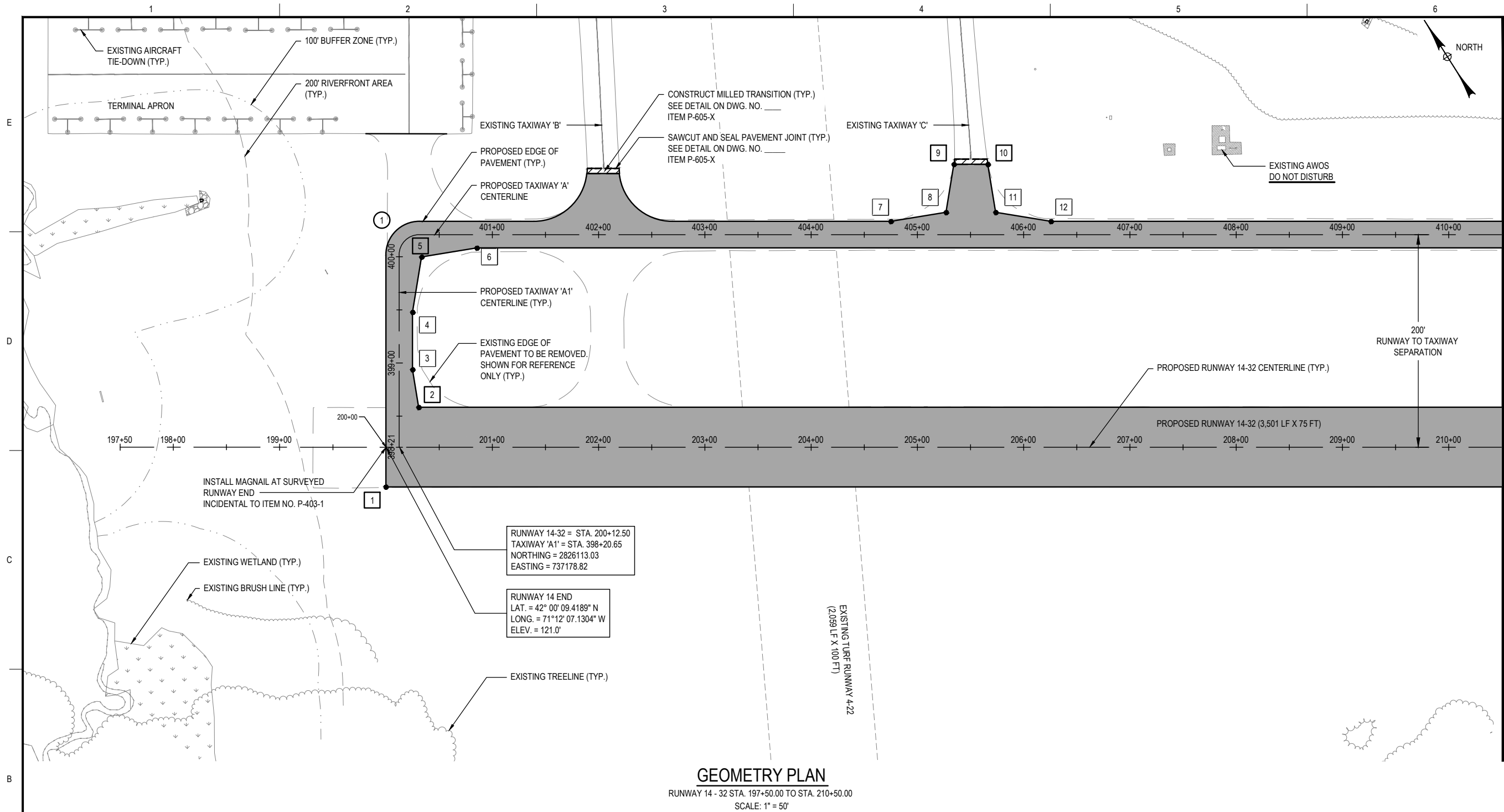
SHEET TITLE

DEMOLITION PLAN
(SHEET 3 OF 3)

DRAWING NO.

D1.3

6 OF 17



- LEGEND**
- AIRPORT PROPERTY LINE
 - EXISTING EDGE OF PAVEMENT
 - SAWCUT AND SEAL PAVEMENT JOINT
 - NEW PAVEMENT
 - MILLED PAVEMENT TRANSITION
 - GEOMETRY LAYOUT POINT
 - CURVE NUMBER
 - WETLAND AREA
 - 100 FT WETLAND BUFFER
 - 200 FT RIVERFRONT AREA
 - EXISTING BUILDING/HANGAR

GEOMETRY PLAN
RUNWAY 14 - 32 STA. 197+50.00 TO STA. 210+50.00
SCALE: 1" = 50'

GEOMETRY LAYOUT TABLE			
POINT NUMBER	STATION AND OFFSET	POINT NUMBER	STATION AND OFFSET
1	R/W 14-32 STA. 200+00.00, 37.50' RT.	7	T/W 'A' STA. 404+75.10, 12.50' LT.
2	R/W 14-32 STA. 200+30.80, 37.50' LT.	8	T/W 'A' STA. 405+27.10, 21.00' LT.
3	T/W 'A' STA. 398+93.65, 12.50' RT.	9	T/W 'A' STA. 405+34.49, 66.21' LT.
4	T/W 'A' STA. 399+47.65, 12.50' RT.	10	T/W 'A' STA. 405+66.43, 66.21' LT.
5	T/W 'A' STA. 400+33.50, 21.00' RT.	11	T/W 'A' STA. 405+73.82, 21.00' LT.
6	T/W 'A' STA. 400+85.50, 12.50' RT.	12	T/W 'A' STA. 406+25.82, 12.50' LT.

CURVE DATA TABLE						
CURVE NO.	DELTA ANGLE	LENGTH (FT.)	RADIUS (FT.)	TANGENT (FT.)	POINT OF CURVATURE (PC)	POINT OF TANGENCY (PT)
1	90.00°	49.48	31.50	31.50	T/W 'A' STA. 400+01.65, 12.50' LT	T/W 'A' STA. 400+31.50, 12.50' LT

MATCHLINE - CONTINUED ON DWG. NO. C1.2
RUNWAY 14 - 32 STA. 210+50.00



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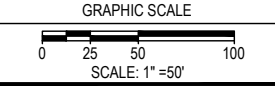
PROJECT

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT

OWNER

MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-07-GEO.		
DESIGNED BY	DCQ		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=50'		



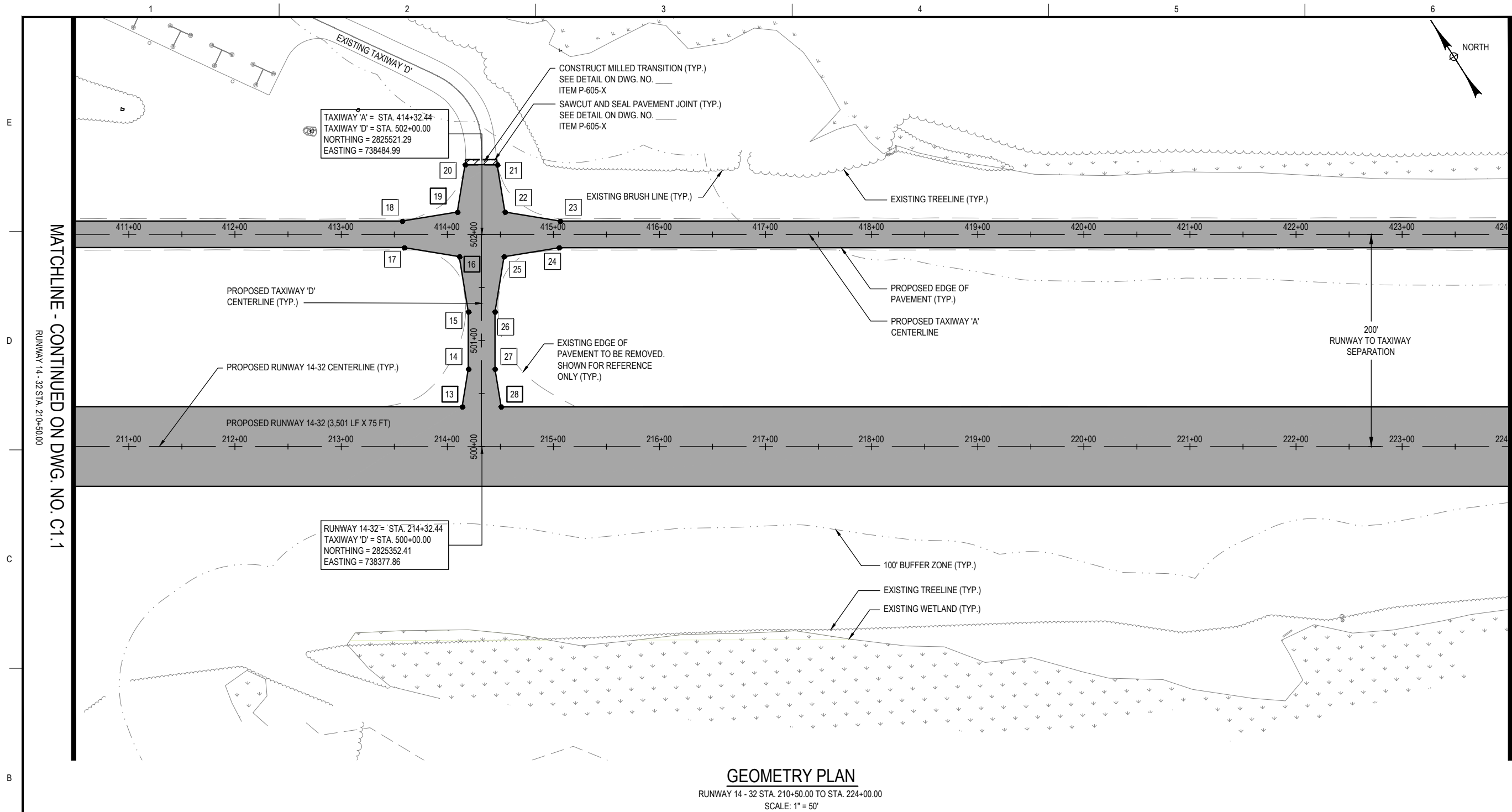
SHEET TITLE

GEOMETRY PLAN
(SHEET 1 OF 3)

DRAWING NO.

C1.1

7 OF 17



GEOMETRY PLAN
RUNWAY 14 - 32 STA. 210+50.00 TO STA. 224+00.00
SCALE: 1" = 50'

LEGEND

- AIRPORT PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- SAWCUT AND SEAL PAVEMENT JOINT
- NEW PAVEMENT
- MILLED PAVEMENT TRANSITION
- GEOMETRY LAYOUT POINT
- CURVE NUMBER
- WETLAND AREA
- 100 FT WETLAND BUFFER
- 200 FT RIVERFRONT AREA
- EXISTING BUILDING/HANGAR

GEOMETRY LAYOUT TABLE			
POINT NUMBER	STATION AND OFFSET	POINT NUMBER	STATION AND OFFSET
13	R/W 14-32 STA. 214+14.14, 37.50' LT.	21	T/W 'A' STA. 414+47.26, 65.60' LT.
14	T/W 'D' STA. 500+73.00, 12.50' LT.	22	T/W 'A' STA. 414+54.43, 21.00' LT.
15	T/W 'D' STA. 501+27.00, 12.50' LT.	23	T/W 'A' STA. 415+06.41, 12.50' LT.
16	T/W 'A' STA. 414+11.44, 21.00' RT.	24	T/W 'A' STA. 415+05.44, 12.50' RT.
17	T/W 'A' STA. 413+59.44, 12.50' RT.	25	T/W 'A' STA. 414+53.44, 21.00' RT.
18	T/W 'A' STA. 413+57.58, 12.50' LT.	26	T/W 'D' STA. 501+27.00, 12.50' RT.
19	T/W 'A' STA. 414+09.58, 21.00' LT.	27	T/W 'D' STA. 500+73.00, 12.50' RT.
20	T/W 'A' STA. 414+16.88, 65.60' LT.	28	R/W 14-32 STA. 214+50.74, 37.50' LT.

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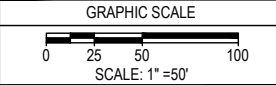
PROJECT

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT

OWNER

MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-07-GEO.		
DESIGNED BY	DCQ		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=50'		



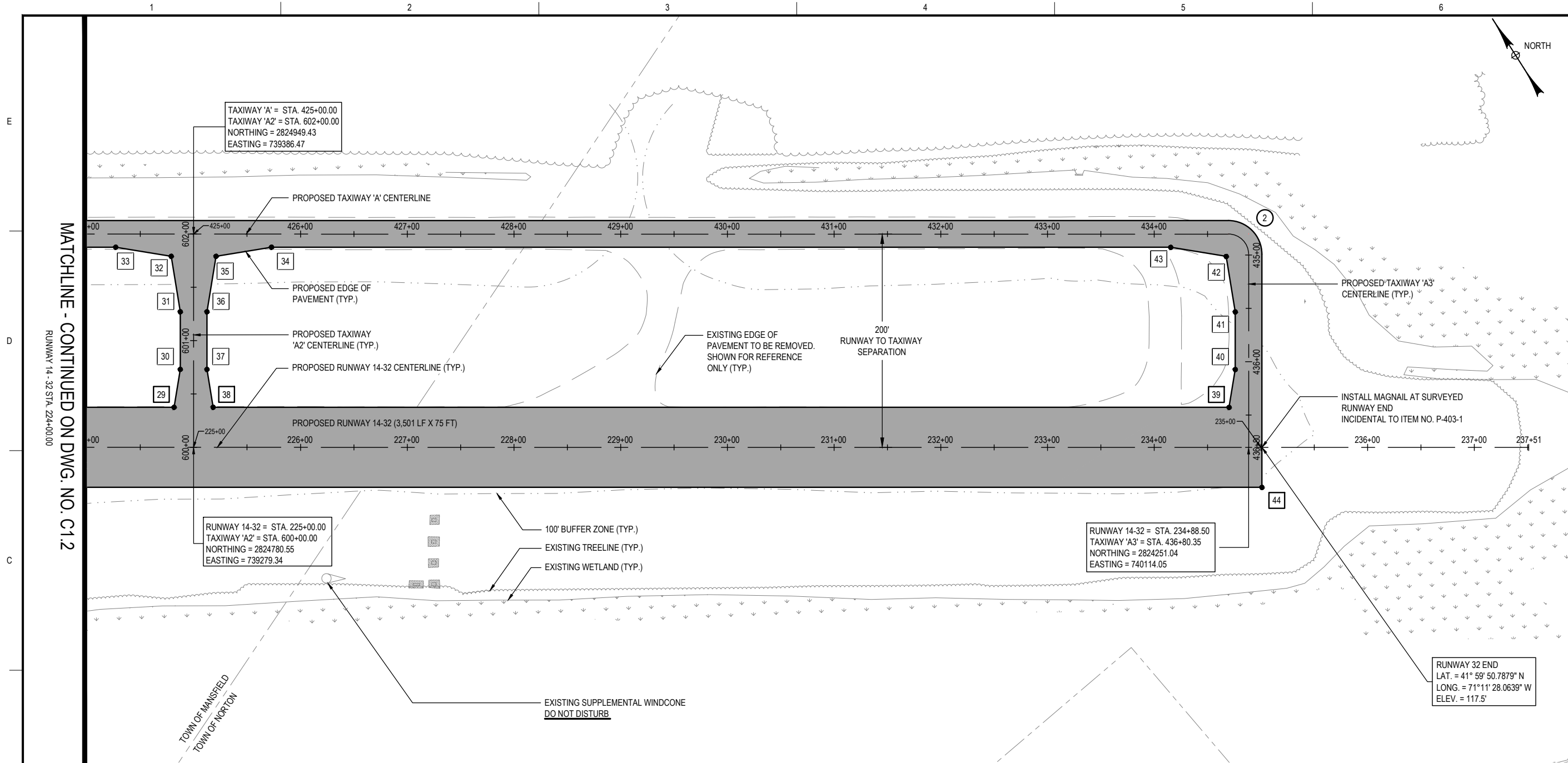
SHEET TITLE

GEOMETRY PLAN
(SHEET 2 OF 3)

DRAWING NO.

C1.2

8 OF 17



GEOMETRY PLAN
RUNWAY 14 - 32 STA. 224+00.00 TO STA. 237+51.00
SCALE: 1" = 50'

LEGEND

- AIRPORT PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- SAWCUT AND SEAL PAVEMENT JOINT
- NEW PAVEMENT
- MILLED PAVEMENT TRANSITION
- GEOMETRY LAYOUT POINT
- CURVE NUMBER
- WETLAND AREA
- 100 FT WETLAND BUFFER
- 200 FT RIVERFRONT AREA
- EXISTING BUILDING/HANGAR

GEOMETRY LAYOUT TABLE			
POINT NUMBER	STATION AND OFFSET	POINT NUMBER	STATION AND OFFSET
29	R/W 14-32 STA. 224+81.70, 37.50' LT.	37	T/W 'A2' STA. 600+73.00, 12.50' RT.
30	T/W 'A2' STA. 600+73.00, 12.50' LT.	38	R/W 14-32 STA. 225+18.30, 37.50' LT.
31	T/W 'A2' STA. 601+27.00, 12.50' LT.	39	R/W 14-32 STA. 234+70.20, 37.50' LT.
32	T/W 'A' STA. 424+79.00, 21.00' RT.	40	T/W 'A' STA. 436+07.35, 12.50' RT.
33	T/W 'A' STA. 424+27.00, 12.50' RT.	41	T/W 'A' STA. 435+53.35, 12.50' RT.
34	T/W 'A' STA. 425+73.00, 12.50' RT.	42	T/W 'A' STA. 434+67.50, 21.00' RT.
35	T/W 'A' STA. 425+21.00, 21.00' RT.	43	T/W 'A' STA. 434+15.50, 12.50' RT.
36	T/W 'A2' STA. 601+27.00, 12.50' RT.	44	R/W 14-32 STA. 235+01.00, 37.50' RT.

CURVE DATA TABLE						
CURVE NO.	DELTA ANGLE	LENGTH (FT.)	RADIUS (FT.)	TANGENT (FT.)	POINT OF CURVATURE (PC)	POINT OF TANGENCY (PT)
2	90.00°	49.48	31.50	31.50	T/W 'A' STA. 434+69.50, 12.50' LT	T/W 'A' STA. 434+99.35, 12.50' LT

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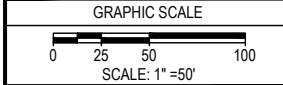
PROJECT

RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT

OWNER

MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-07-GEO.		
DESIGNED BY	DCQ		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=50'		



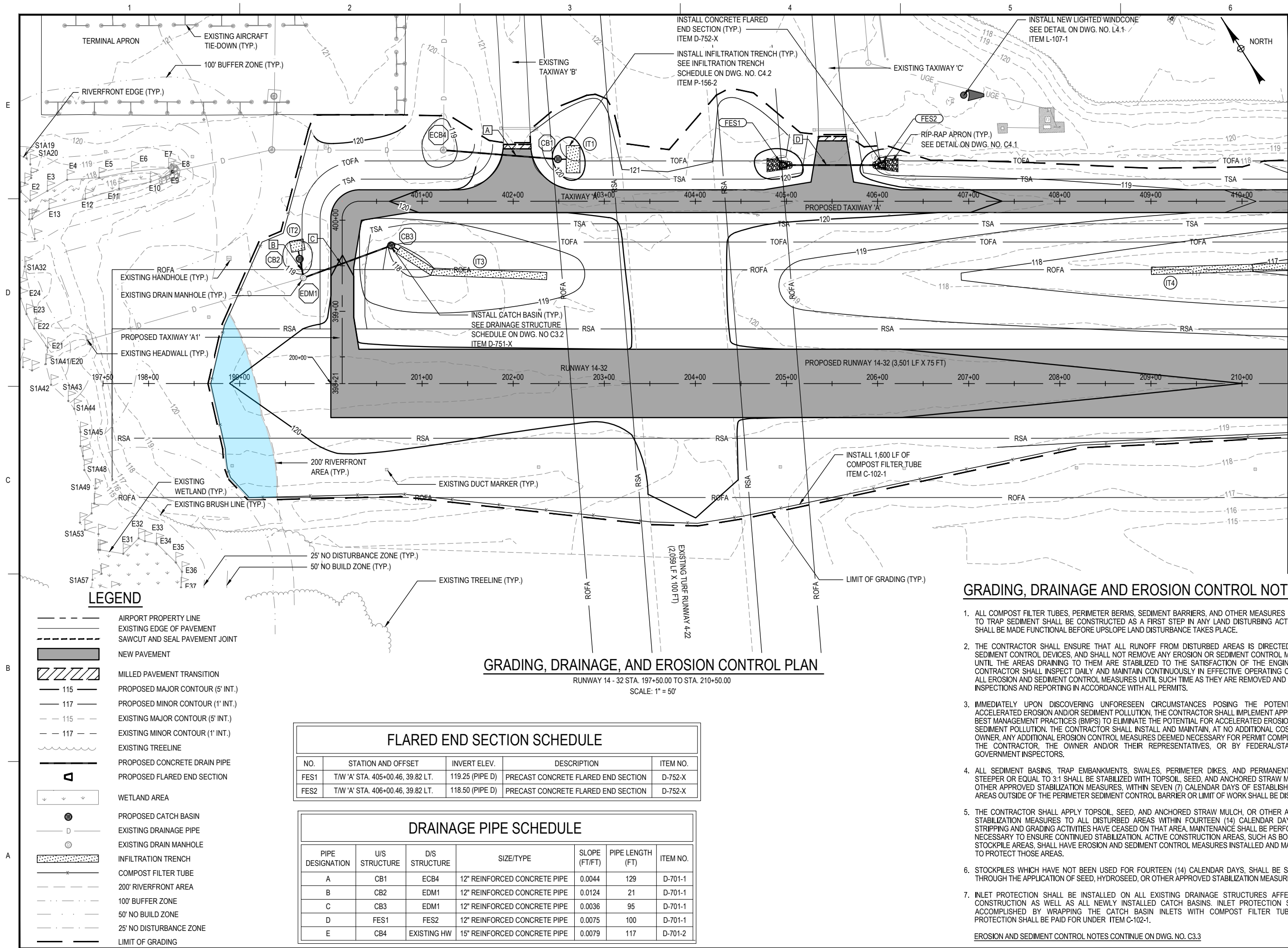
SHEET TITLE

GEOMETRY PLAN
(SHEET 3 OF 3)

DRAWING NO.

C1.3

9 OF 17



MATCHLINE - CONTINUED ON DWG. NO. C3.2
RUNWAY 14 - 32 STA. 210+50.00

GRADING, DRAINAGE AND EROSION CONTROL NOTES:

- ALL COMPOST FILTER TUBES, PERIMETER BERMS, SEDIMENT BARRIERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES, AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURES UNTIL THE AREAS DRAINING TO THEM ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIME AS THEY ARE REMOVED AND CONDUCT INSPECTIONS AND REPORTING IN ACCORDANCE WITH ALL PERMITS.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. THE CONTRACTOR SHALL INSTALL AND MAINTAIN, AT NO ADDITIONAL COST TO THE OWNER, ANY ADDITIONAL EROSION CONTROL MEASURES DEEMED NECESSARY FOR PERMIT COMPLIANCE BY THE CONTRACTOR, THE OWNER AND/OR THEIR REPRESENTATIVES, OR BY FEDERAL/STATE/LOCAL GOVERNMENT INSPECTORS.
- ALL SEDIMENT BASINS, TRAP EMBANKMENTS, SWALES, PERIMETER DIKES, AND PERMANENT SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH TOPSOIL, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES, WITHIN SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT. NO AREAS OUTSIDE OF THE PERIMETER SEDIMENT CONTROL BARRIER OR LIMIT OF WORK SHALL BE DISTURBED.
- THE CONTRACTOR SHALL APPLY TOPSOIL, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS WITHIN FOURTEEN (14) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED ON THAT AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. ACTIVE CONSTRUCTION AREAS, SUCH AS BORROW OR STOCKPILE AREAS, SHALL HAVE EROSION AND SEDIMENT CONTROL MEASURES INSTALLED AND MAINTAINED TO PROTECT THOSE AREAS.
- STOCKPILES WHICH HAVE NOT BEEN USED FOR FOURTEEN (14) CALENDAR DAYS, SHALL BE STABILIZED THROUGH THE APPLICATION OF SEED, HYDROSEED, OR OTHER APPROVED STABILIZATION MEASURES.
- INLET PROTECTION SHALL BE INSTALLED ON ALL EXISTING DRAINAGE STRUCTURES AFFECTED BY CONSTRUCTION AS WELL AS ALL NEWLY INSTALLED CATCH BASINS. INLET PROTECTION SHALL BE ACCOMPLISHED BY WRAPPING THE CATCH BASIN INLETS WITH COMPOST FILTER TUBE. INLET PROTECTION SHALL BE PAID FOR UNDER ITEM C-102-1.

EROSION AND SEDIMENT CONTROL NOTES CONTINUE ON DWG. NO. C3.3

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

RUNWAY 14 - 32 STA. 197+50.00 TO STA. 210+50.00
SCALE: 1" = 50'

FLARED END SECTION SCHEDULE

NO.	STATION AND OFFSET	INVERT ELEV.	DESCRIPTION	ITEM NO.
FES1	T/W 'A' STA. 405+00.46, 39.82 LT.	119.25 (PIPE D)	PRECAST CONCRETE FLARED END SECTION	D-752-X
FES2	T/W 'A' STA. 406+00.46, 39.82 LT.	118.50 (PIPE D)	PRECAST CONCRETE FLARED END SECTION	D-752-X

DRAINAGE PIPE SCHEDULE

PIPE DESIGNATION	U/S STRUCTURE	D/S STRUCTURE	SIZE/TYPE	SLOPE (FT/FT)	PIPE LENGTH (FT)	ITEM NO.
A	CB1	ECB4	12" REINFORCED CONCRETE PIPE	0.0044	129	D-701-1
B	CB2	EDM1	12" REINFORCED CONCRETE PIPE	0.0124	21	D-701-1
C	CB3	EDM1	12" REINFORCED CONCRETE PIPE	0.0036	95	D-701-1
D	FES1	FES2	12" REINFORCED CONCRETE PIPE	0.0075	100	D-701-1
E	CB4	EXISTING HW	15" REINFORCED CONCRETE PIPE	0.0079	117	D-701-2



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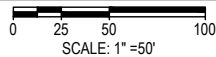
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PROJECT	OWNER
RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT	MANSFIELD MUNICIPAL AIRPORT MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-07-GRA.		
DESIGNED BY	AWC		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=50'		

GRAPHIC SCALE

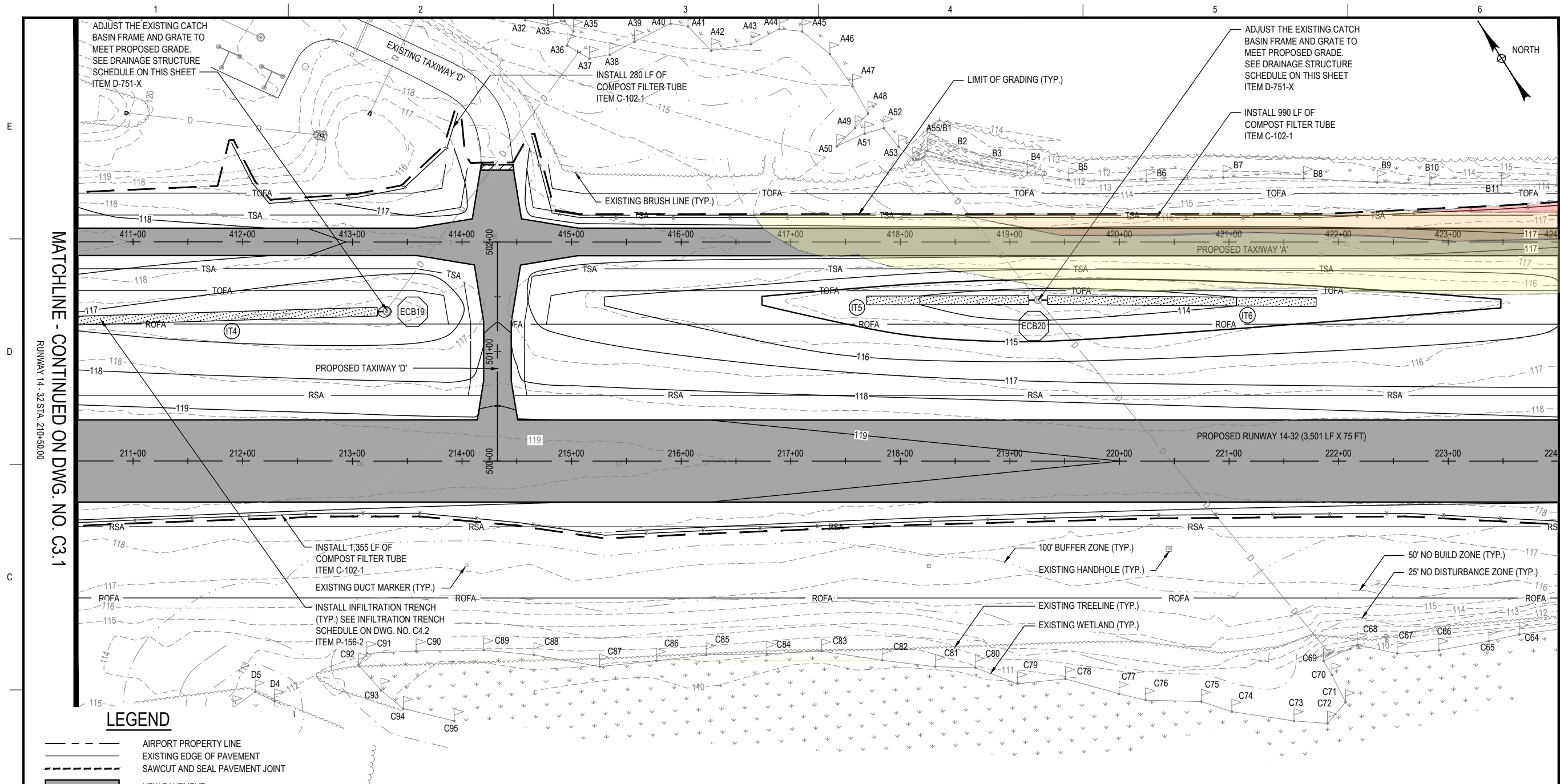


SHEET TITLE

GRADING,
DRAINAGE AND
EROSION CONTROL
PLAN
(SHEET 1 OF 3)

DRAWING NO.

C3.1



GRADING, DRAINAGE AND EROSION CONTROL PLAN

RUNWAY 14 - 32 STA. 210+50.00 TO STA. 224+00.00
SCALE: 1" = 50'

DRAINAGE STRUCTURE SCHEDULE

NO.	STRUCTURE	T/W STA. OFF.	RIM ELEV.	INVERT IN ELEV.	INVERT IN ELEV.	INV. OUT ELEV.	DESCRIPTION
CB1	4' DIA. CATCH BASIN	402+49.25 46.25' LT.	119.75	117.67 (6" PVC)		(A) 116.93 (12" RCP)	
ECB4	EXISTING CATCH BASIN	401+23.58 56.18' LT.	118.67	(A) 116.37 (12" RCP)		EXISTING 18" RCP	
CB2	4' DIA. CATCH BASIN	399+57.40 46.60' LT.	118.75	116.92 (6" PVC)		(B) 116.92 (12" RCP)	
CB3	4' DIA. CATCH BASIN	400+66.25 48.50' RT.	118.00	116.17 (6" PVC)		(C) 115.83 (12" RCP)	
EDM1	EXISTING DRAIN MANHOLE	399+36.72 42.63' LT.	119.49	(B) 115.49 (12" RCP)	(C) 115.49 (12" RCP)	EXISTING 24" RCP	
ECB19	EXISTING CATCH BASIN	413+31.48 63.38' RT.	116.00	114.17 (6" PVC)		EXISTING 18" RCP	
ECB20	EXISTING CATCH BASIN	419+25.82 52.96' RT.	113.25	111.45 (6" PVC)	111.45 (6" PVC)	EXISTING 36" RCP	
CB4	4' DIA. CATCH BASIN	433+29.15 61.05' RT.	114.50	112.67 (6" PVC)		(E) 112.00 15" RCP	

GRADING, DRAINAGE AND EROSION CONTROL NOTES:

FOR GRADING, DRAINAGE AND EROSION CONTROL NOTES, SEE DWG. NOS. C3.1 AND C3.3.



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MATCHLINE - CONTINUED ON DWG. NO. C3.3

PROJECT
RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32
(APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A'
(APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1',
'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND
INSTALL NEW ELECTRICAL VAULT

OWNER
MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
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PROJECT NO.	777141
CADD FILE	777141-07-GR.
DESIGNED BY	AWC
DRAWN BY	DCQ
CHECKED BY	MKO
DATE	MARCH 2025
DRAWING SCALE	1"=50'

GRAPHIC SCALE

0 25 50 100
SCALE: 1" = 50'

SHEET TITLE

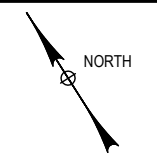
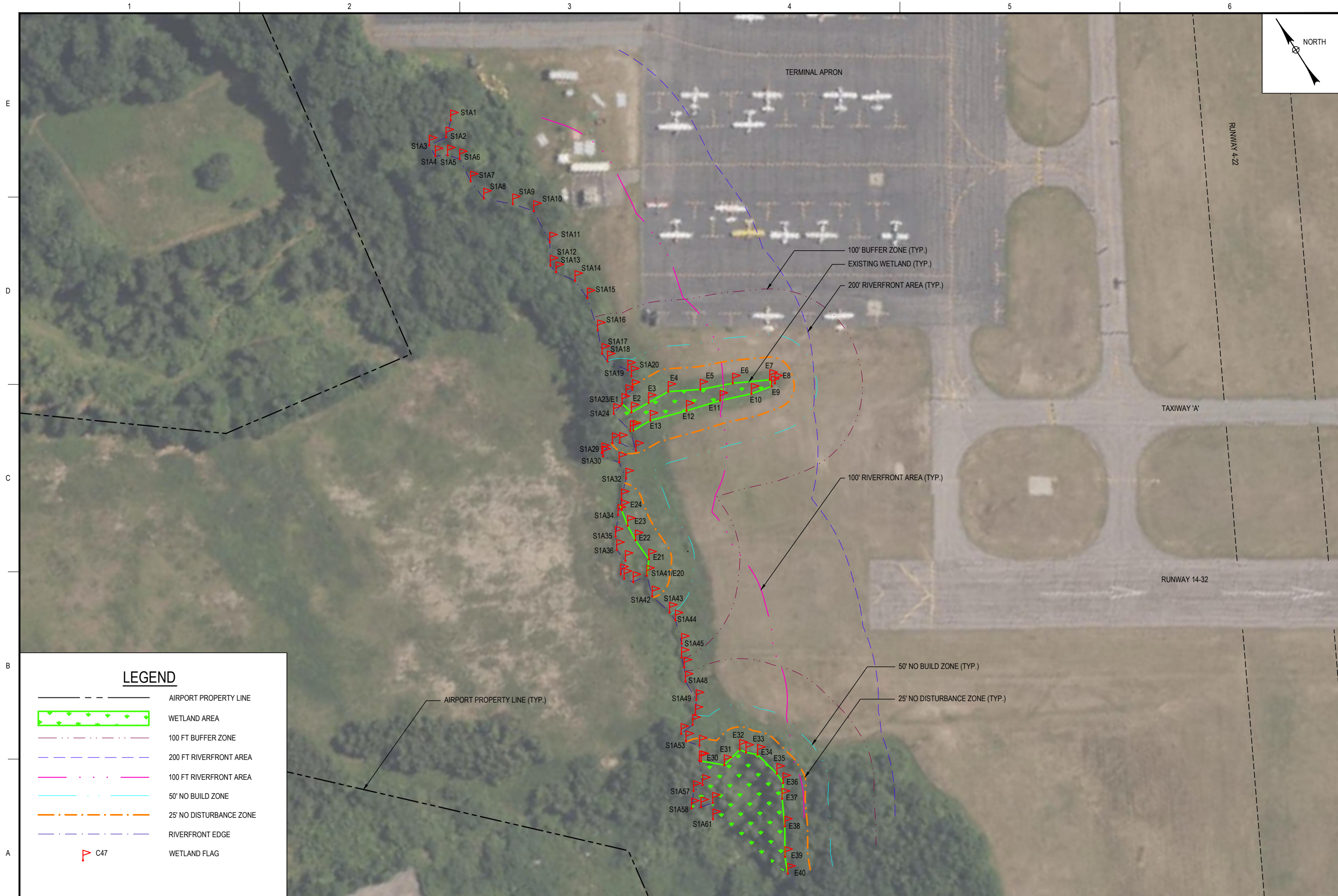
GRADING,
DRAINAGE AND
EROSION CONTROL
PLAN
(SHEET 2 OF 3)

DRAWING NO.

C3.2

11 OF 17

NOT FOR CONSTRUCTION





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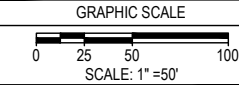
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PROJECT	RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32 (APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A' (APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1', 'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND INSTALL NEW ELECTRICAL VAULT		
	OWNER		
OWNER	MANSFIELD MUNICIPAL AIRPORT		
	MANSFIELD, MASSACHUSETTS		

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-02-RES.		
DESIGNED BY	DCQ		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=50'		



SHEET TITLE

**MANSFIELD
RESOURCE AREA
PLAN
(SHEET 1 OF 2)**

DRAWING NO.

R1.1

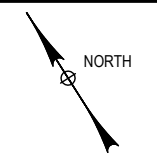
15 OF 17

MANSFIELD RESOURCE AREA NOTES:

1. THE DELINEATION OF ENVIRONMENTAL RESOURCE HAVE BEEN PERFORMED BY GZA GeoENVIRONMENTAL, INC. ON NOVEMBER 6, 2024.

MANSFIELD RESOURCE AREA PLAN

SCALE: 1" = 50'



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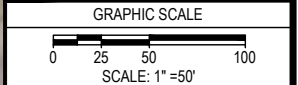
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PROJECT
RECONSTRUCT, MARK, LIGHT AND SIGN RUNWAY 14-32
(APPROX. 3,501 LF X 75 FT), PARALLEL TAXIWAY 'A'
(APPROX. 3,485 LF X 25 FT), AND STUB TAXIWAYS 'A1',
'A2', 'A3', AND 'D' (APPROX. 150 LF X 25 FT EA); AND
INSTALL NEW ELECTRICAL VAULT

OWNER
MANSFIELD MUNICIPAL AIRPORT
MANSFIELD, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777141		
CADD FILE	777141-02-RES.		
DESIGNED BY	DCQ		
DRAWN BY	DCQ		
CHECKED BY	MKO		
DATE	MARCH 2025		
DRAWING SCALE	1"=50'		



SHEET TITLE

NORTON
RESOURCE AREA
PLAN

DRAWING NO.

R2.1

LEGEND

- AIRPORT PROPERTY LINE
- WETLAND AREA
- 100 FT BUFFER ZONE
- 200 FT RIVERFRONT AREA
- 100 FT RIVERFRONT AREA
- WETLAND FLAG C47
- 25' PROTECTION ZONE
- RIVERFRONT EDGE

NORTON RESOURCE AREA NOTES:

1. THE DELINEATION OF ENVIRONMENTAL RESOURCE HAVE BEEN PERFORMED BY GZA GeoENVIRONMENTAL, INC. ON NOVEMBER 6, 2024.

NORTON RESOURCE AREA PLAN

SCALE: 1" = 50'

Conservation Commission

6 Park Row, Mansfield, Massachusetts 02048



Special Conditions for Order of Conditions for 265 Fruit Street, Mansfield, MA; (DEP SE 211-1018) under the Mansfield Protection Bylaw Chapter 220

Joel Brandwine, Mansfield Municipal Airport Commission, 265 Fruit Street, Mansfield, MA; Mansfield Municipal Airport for the reconstruction of the Airport's runway, taxi way and stub taxiways, include regrading of areas in order to comply with Federal Aviation Administration grading criteria along the stormwater management improvements within 100 feet of a Bordering Vegetated Wetland and 200-foot Riverfront Area of Wading River.:

1. RECORD ORDER No work can be started until the Order of Conditions has been recorded with the Bristol County Registry of Deeds and the receipt of the Order is returned to the Commission filled in by the Registry.

2. PLAN OF RECORD All work must conform to the plan dated, referenced as "the plan of record" in this Order.

3. LIMIT OF WORK All limits of work and erosion controls shall be installed prior to any construction, clearing, or excavation. The erosion controls shall consist of a 8" diameter biodegradable mulch-filled silt sock with wooden stakes every 10 feet on each sides of sock or equivalent (do not pierce silt sock with stakes). In addition to the silt sock, trenched-in silt fence may be required depending on the specific site conditions. See the Conservation Agent (Agent) for specific erosion control design standards. The Applicant shall notify the Agent when any such devices or measures are installed so that a site visit can be conducted prior to the commencement of work.

4. ADDITIONAL MITIGATION The Commission reserves the right to require additional mitigation or erosion control devices or measures if mitigation or erosion control devices are not adequately installed or maintained on site.

5. STABILIZATION The Applicant shall ensure that all demarcation (i.e. limits of work) and erosion control devices will remain in place and be maintained throughout the construction process and until all disturbed areas are stabilized. Stabilization shall be achieved once a complete vegetative cover is reached. Seeded areas shall be covered with a suitable protective cover to allow the seed to germinated and become established. All side slopes greater than 3:1 (but less than 2:1) are to be covered with jute mesh and seeded. At no point shall erosion occur resulting in sediment entering the wetland areas. If erosion occurs, the Agent is to be contacted to review the extent of the erosion and determine follow-up actions.

6. ROOF RUNOFF All roof runoff is to be directed in to drywells or equivalent drainage components approved by the Commission. The Commission or its agent shall review the locations of the drywells.

7. CONSTRUCTION SEQUENCE A construction sequence is to be submitted to the Commission prior to the start of work.

8. START WORK NOTIFICATION The Conservation Commission or its agent is to be notified of the starting date of the work prior to its commencement.

9. PRE-CONSTRUCTION MEETING Prior to the commencement of work, a pre-construction meeting shall be held with the Agent, the Engineer and/or Representative, and the General Contractor to review the Order of Conditions, scope of work and construction sequencing.

10. OOC ON-SITE The Applicant shall be responsible to ensure that all contractors on site during the construction have received and reviewed the Order of Conditions and all plans of record.

11. WETLAND FLAGGING Wetland flagging must remain in place until the project has been completed and the Certificate of Compliance issued.

12. COC WITH AS-BUILT The Certificate of Compliance shall be requested in writing upon completion of the project. At the same time, the applicant or any successor shall, upon completion of the project; submit an as-built plan and letter signed by a professional engineer, certifying that the work has been done in accordance with the approved plan.

13. REVISIONS TO BE REVIEWED Any modifications or revisions to the plan(s) referenced in this Order must be submitted to the Commission for review. For single family lots, this Order is for the structures shown on the plan of record only. Any additional structures including, but not limited to, decks, patios, sheds, pools, walkways and/or any hardscape features must be reviewed by the Commission. If, after their review, the Commission finds that the changes are not significant enough (minor modifications) to warrant an Amended Order or new Notice of Intent, then the revised plans shall be considered the new plan of record. If the changes are significant enough to warrant an Amended Order or new Notice of Intent, then the applicant is required to file accordingly.

14. NO SYNTHETIC CHEMICALS No synthetic fertilizer, herbicides, pesticides or fungicides can be used; only organic products may be used.

15. STORMWATER O&M All the terms and conditions set forth in the Stormwater Management Plan for (project title) prepared by (Engineer), submitted on (date) are to be included with this Order of Conditions. All on-going O&M plan activities are to be recorded as noted. All reports and checklist are to be submitted to the Commission as noted.

16. DUMPING OF LAWN CLIPPINGS IS PROHIBITED Dumping of lawn clippings and/or yard debris into a wetland and/or 25-foot No Disturb Zone is prohibited. Storage is prohibited in these areas as well.

Special Conditions: If allowable consultant to work with agent to establish buffer strip along the North side of the drainage swale/BVW with an herbaceous seed mix, to be mowed on an annual basis.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #
SE 211-1018
eDEP Transaction #
Mansfield
City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

1. Date of Issuance

Please indicate the number of members who will sign this form. This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signature

Michael Healey

Printed Name

Signature

Aaron Roth

Printed Name

Signature

Aaron Gallagher

Printed Name

Signature

Ryan O'Hara

Printed Name

Signature

Laura Konick

Printed Name

Signature

Robert MacDonald

Printed Name

Signature

Printed Name

Signature

Printed Name

☐ by hand delivery on

☐ by certified mail, return receipt requested, on

Date

Date

APPENDIX A2

**TOWN OF NORTON, CONSERVATION COMMISSION, ORDER OF CONDITIONS #250-
1177**



Norton Conservation Commission
70 East Main Street
Norton MA 02766

April 30, 2025

Joel Brandwine
Mansfield Municipal Airport Commission
6 Park Row
Mansfield, MA 02048

Dear Mr. Brandwine,

Enclosed is the wetland permit (Order of Conditions, **File #250-1177**) issued **April 30, 2025**. The appeal period is 10 days. No work should be performed prior to **May 15, 2025**.

Please carefully read the Special Conditions. This permit must be recorded at the Registry of Deeds. Please provide us with a copy of the receipt. Please contact me for a mandatory pre-construction meeting.

The Order of Conditions shall expire **April 30, 2028**. If you have any questions, please contact me at (508) 285-0275. Thank you.

Sincerely,

John Thomas
Conservation Director

DO NOT RECORD THIS PAGE



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

250-1177

MassDEP File #

eDEP Transaction #

Norton

City/Town

A. General Information

Please note:
 this form has
 been modified
 with added
 space to
 accommodate
 the Registry
 of Deeds
 Requirements

Important:
 When filling
 out forms on
 the
 computer,
 use only the
 tab key to
 move your
 cursor - do
 not use the
 return key.



1. From: Norton
 Conservation Commission

2. This issuance is for (check one):
 a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

Joel

a. First Name

Brandwine

b. Last Name

Mansfield Municipal Airport Commiss

c. Organization

6 Park Row

d. Mailing Address

Mansfield

e. City/Town

MA

f. State

02048

g. Zip Code

4. Property Owner (if different from applicant):

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

5. Project Location:

0 Woodland Road

a. Street Address

Norton

b. City/Town

3

c. Assessors Map/Plat Number

428

d. Parcel/Lot Number

Latitude and Longitude, if known:

41d99m785s

d. Latitude

-71d19m184s

e. Longitude



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

250-1177

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A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

Bristol

a. County

941

c. Book

b. Certificate Number (if registered land)

14

d. Page

7. Dates: 3/21/2025 4/14/2025 4/30/2025
a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Town of Mansfield Massachusetts, Mansfield Municipal Airport

a. Plan Title

Gale

b. Prepared By

March 2025

d. Final Revision Date

Mark Ottariano

c. Signed and Stamped by

1 inch = 20ft

e. Scale

f. Additional Plan or Document Title

g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

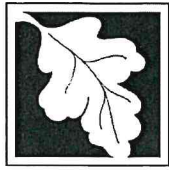
Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☐ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
d. ☒ Private Water Supply e. ☐ Fisheries f. ☒ Protection of Wildlife Habitat
g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection
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B. Findings (cont.)

Denied because:

- b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. ☒ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) 25
a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	<u> </u> a. linear feet	<u> </u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
	<u> </u> e. c/y dredged	<u> </u> f. c/y dredged		
7. <input type="checkbox"/> Bordering Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
Cubic Feet Flood Storage	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet		
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. <input type="checkbox"/> Riverfront Area	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet		
Sq ft within 100 ft	<u> </u> c. square feet	<u> </u> d. square feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

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MassDEP File #

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Norton

City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



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B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 4/30/2028 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



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C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 250-1177 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
 - (1) ☒ is subject to the Massachusetts Stormwater Standards
 - (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
 - i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
 - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See Attached Special Conditions

- 20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.

FINDINGS

1. *The following Resource Areas have been confirmed on the project site:*
 - A. Bordering Vegetated Wetland (BVW) has been identified as a resource area, subject to protection under the Wetland Protection Act and Regulations 310 CMR 10.55 as shown on the final approved plans. ***No direct alteration to BVW is proposed. Site work is proposed within BVW Buffer Zone (100 FT).***
2. The site work area ***is not*** located within a Priority Habitat and Estimated Habitat area as designated by the Natural Heritage and Endangered Species Program (NHESP).
3. The project ***is*** subject to the **Town of Norton Stormwater Management Bylaw (Chapter 133)**. Receipt of an Order of Conditions satisfies the requirements under the Stormwater Management Bylaw. The Applicant understands the Conservation Director or Town Officials may perform on-site site inspections through-out construction to ensure site compliance with the Stormwater Management Standards and **Stormwater Management Bylaw (Chapter 133)**.
4. This permit authorizes the following activities within jurisdiction of the Conservation Commission: ***The proposed work includes the renovation of Runway 14-32, parallel Taxiway A, and stub taxiways at the airport. Work will require compliance with FAA grading standards and improvements to stormwater management within 100 feet of a BVW. No other work within the jurisdiction of the NCC is approved by this Order.***

SPECIAL CONDITIONS

A. Prior to Construction

1. **Prior to commencement of construction activities**, the applicant shall complete the following:
 - a. Proof of payment of the legal notice bill shall be submitted;
 - b. Proof of recording of the Order of Conditions at the Bristol County North Registry of Deeds shall be submitted;
 - c. Updated/final version of the Operation and Maintenance Plan & SWPPP;
 - d. MassDEP sign shall be installed/posted near the roadway; and
 - e. Sediment control measures shall be installed and approved by Conservation Director.
2. **Other Permits or Approvals.** It is the responsibility of the Applicant to complete any review required by all agencies with jurisdiction over the activity that is the subject of this Order of Conditions (Order), and to procure all required permits or approvals prior to construction. If review by other agencies results in material changes, alterations, or revisions to the project not included in the referenced plans, they must be presented and approved by the Commission prior to their implementation.
3. **Preconstruction Meeting.** Once Conditions 1 and 2 are completed, the Applicant may request to schedule a **mandatory** preconstruction meeting between the applicant, contractor, subcontractors and the Conservation Director. Each attendee shall bring a copy of the final Order to the meeting. At that time, the Applicant will be asked to sign a "Certificate of Understanding" for the proposed project.
4. The Conservation Director shall be provided all names, addresses, phone numbers and emergency phone numbers for all contractors, and notified, in writing, no later than 48 hours, prior to the start of work on the site.

B. Administrative Conditions

5. **On Site Documents.** A copy of the Final Approved Plans and Order of Conditions shall be kept on-site at all times during construction.
6. **This Order shall be included in all applicable construction contracts**, subcontracts, and specifications dealing with the work proposed and shall supersede any conflicting contract requirements. The

Applicant shall assure that all contractors, subcontractors, and personnel performing the permitted work are fully aware of the permit's terms and conditions.

7. **Any changes** in the approved plans, Notice of Intent, or change resulting from the preceding conditions, must be submitted to the Commission for their approval with a cover letter and filing fee prior to implementation. A copy of such request shall, at the same time, be sent to the DEP. After their review, one of the following responses will be made by the Commission:
 - a. If the Commission finds, by majority vote, said changes to be **insignificant** to the interests of the Act, then the Commission will so notify the Applicant in writing.
 - b. If the Commission finds, by majority vote, said changes to be significant and/or deviate from the original plans, Notice of Intent, or this Order, and that the interests of the Act would best be served by the issuance of additional conditions, the Commission will conduct another Public Hearing within 21 days, advertised at the Applicant's expense, in order to take testimony from all interested parties. Within 21 days of the close of the Public Hearing, the Commission will issue an **Amended Order**. No work shall be undertaken until the Amended Order of Conditions has been recorded in the Bristol County North Registry of Deeds in the manner described in General Condition 9, and until all administrative appeal periods have elapsed.
 - c. If the Commission finds, by majority vote, said changes to be significant and would substantially change the nature, scope, purpose, or impact of the project, then the Commission will direct the Applicant to file a **new Notice of Intent**.
9. **Site Visits.** The Conservation Director and Commission members will coordinate with the MMA for arranging inspections and/or the taking of pictures prior to the issuance of a Certificate of Compliance.

C. Construction Requirements

10. **Limit of Work Boundary.** Prior to tree clearing or ground disturbance, the limit of work shall be field staked by Professional Land Surveyor and established by either construction fencing and/or sediment controls.
11. **Post-development storm water management BMPs** (bioretention areas, grassed swales, infiltration areas, etc.) shall be installed in the initial stages of the project and shall be permanently stabilized prior to operation-term runoff is directed to them. In addition, if the BMPs are constructed in the non-growing seasons, erosion control blankets or approved equal stabilization method shall be applied. Construction-term runoff shall not be allowed to enter the operation-term storm water management infiltration areas.
12. **Winter Phasing.** Between November 1st and March 1st of any given year, the general contractor shall submit a plan for winter stabilization to the Commission for their review and approval. The contractor shall update the Commission regarding the winter phasing and temporary basins (location, number, size, and seasonal conditions, etc.) and submit revised plans prior to implementation.
13. **Sedimentation Discharge.** Site construction efforts shall be contained to the limit of work until a Certificate of Compliance is issued by the Commission. In the event that illicit discharge and siltation occurs off-site, the site contractor shall take corrective actions within 24-hours. Any off-site discharge shall be documented and reported to the Conservation Director in accordance with the Stormwater Pollution Prevention Plan and Local Stormwater Management Bylaw. Failure to comply with this condition may lead to Enforcement Action from the Conservation Commission.

D. Sediment Controls / Limit of Work

14. **Limit of Work (LOW).** No disturbance of any kind is permitted beyond the LOW, unless approved by this Order. Workers shall be informed that no use of machinery, storage of machinery or materials, stockpiling of soil, or construction activity is to occur beyond this LOW line at any time.
15. **Sediment Controls.**

- a. **Installation.** All sediment controls shall be installed along the approved and staked line with minimal disturbance to vegetation. The sedimentation controls shall be placed and maintained throughout the duration of the construction project and not removed until a Certificate of Compliance is issued, or otherwise directed by the Conservation Director.
- b. **Haybales are prohibited and shall not be used** as sediment controls.
- c. **Erosion/sediment control measures** (silt fence, blankets etc.) shall not contain any nylon netting or nylon mesh backing, which is found to be a hazard to local wildlife.
- d. **Biodegradable controls**, which must be 100% natural biodegradable material, shall be used including silt fence, rolled erosion control products (i.e. mulch or compost socks, fiber rolls, etc.), mulch control netting, erosion control blankets, or turf mats. Photodegradable, Oxo-(bio)degradable or UV degradable plastics are not considered biodegradable. When no longer required, temporary controls should be promptly removed.
- e. **Sediment Control Stockpile.** An adequate stockpile of sediment control materials shall be on site at all times for emergency or routine replacement and shall include materials to repair or replace silt fences or any other devices that may be used during construction. This stockpile shall be maintained in effect until the site has been fully stabilized.
- f. **Frozen Conditions.** The applicant shall use a 12" silt/compost sock instead of the silt fence in frozen conditions. If temporary or final stabilization is not achieved on disturbed areas by October 15, temporary stabilization consisting of clean grain straw mulch at a rate of 2 tons per acre shall be applied to exposed areas (Or 3-inch thickness, with no bare spots or ground showing). Mulch anchoring shall consist of tackifier or jute netting.

E. Movement and Maintenance of Equipment

- 15. The Applicant's representative shall coordinate and designate areas where equipment will be driven, stored, or parked to within the work area throughout the construction of the proposed project.
- 16. Undercarriages, wheel wells, tires/tracks and parts of the equipment that come into contact with soil shall be thoroughly cleaned to remove all mud, dirt, debris and plant parts with a high-pressure washer or similar method before equipment leaves the site.
- 17. All equipment shall be inspected regularly for leaks. Any leaking hydraulic lines, cylinders or any other components shall be fixed immediately.
- 18. Fuels, lubricants or hazardous materials shall not be stored, transferred between containers or mixed, and machinery shall not be refueled, within any resource area or the 100-foot buffer zone.

F. Site Stabilization / Slopes / Materials

- 19. **Soil and Excavated Material.** The Applicant shall ensure compliance with the following requirements:
 - a. Soil disturbance shall be minimized and excavation sites shall be maintained to prohibit (re)emerging invasive species.
 - b. All fill brought on site must be clean, debris-free, and devoid of invasive plants or their parts or seeds.
 - c. Avoid transporting soil, fill, stone, hay, or other materials.
- 20. **Slopes.** No deviations shall be made to the approved plan's limit of work or the steepness of the slopes, and no **additional** retaining walls, boulder walls, or rip rap slopes shall be constructed within wetland resource areas or 100-foot buffer zone without prior review and approval by the Commission.
- 21. **Stabilization.** The areas of construction shall remain in a stable condition at the close of each construction day. Sediment controls should be inspected at this time, and repaired, reinforced or replaced, as necessary.

22. **Wood chips** from the trees may be used to stabilize the soil. Rough cut wood chips that include all tree parts provide an excellent smothering material that:
 - a. Is slow to decompose;
 - b. Stays on surface, slow to enter soil;
 - c. Foils fresh weed seedlings and blocks vines and existing woody plants;
 - d. Permits passage of air and water, while retaining soil moisture;
 - e. Encourages microbial populations;
 - f. Are locally generated and locally disposed; and
 - g. Can be used safely with new tree and shrub plantings.
23. **Wood chips** or weed-free mulch should be applied at a thickness that will suppress establishment and growth of invasive plants. Ensure that mulch remains on-site; mulches may move if watering results in surface flow and lighter mulches may blow away. Consider the use of Tackifiers or biodegradable netting to stabilize mulch on erosion prone areas. Add more mulch or wood chips after they begin to decompose to retain thickness/effectiveness.
24. **No disturbed soils shall be left unprotected** or without erosion control for longer than 14 days and shall be temporarily stabilized if they are to remain undisturbed for 14 days or longer. Any soil stockpiles that will remain on site for longer than 14 days must be fully covered with an impermeable material, or seeded with a short-lived (incapable of reseeding) annual herbaceous cover crop.
25. Any soil areas that will remain exposed for longer than 90 days shall be mulched or covered with a short-lived (incapable of reseeding) annual herbaceous cover crop.
26. **November Deadline.** All disturbed areas shall be graded, loamed and seeded with vegetation (grass, groundcover, etc.) prior to November 1 of any construction year to prevent soil erosion and siltation.
27. **No Sedimentation.** There shall be no sedimentation into wetlands, water bodies or Town of Norton roadways from discharge pipes or surface runoff leaving the site.
28. **All construction materials,** earth stockpiles, landscaping materials, slurry pits, waste products, refuse, debris, stumps, slash, or excavate may only be stockpiled or collected in areas as shown and labeled on the approved plan and outside all resource areas and buffer zones under cover and surrounded by a double-staked row of sediment controls to prevent contact with rain water.
29. **Cleanup.** Upon completion of construction, the Applicant shall ensure that all trash is properly disposed and not dumped into or left in any resource area. All wetland resource areas shall be kept clean of rubbish, debris, and construction materials. The Applicant shall be responsible for ensuring that all site workers properly dispose of materials. Any debris or "dumped" material placed in wetland resource areas shall be removed immediately.

G. Post Construction

30. **Prior to requesting a final Certificate of Compliance,** the Applicant shall demonstrate (per 310 CMR 10.58(5)(h)) that the project site has been successfully completed and have been reestablished with 75% cover of native plant species (includes trees, shrubs and herbaceous layer that are being preserved).
31. **Upon completion** of all proposed and approved work the Applicant shall complete the following:
 - a. Ensure all disturbed areas have been stabilized with loam and seed, and are established with grass or other vegetative cover;
 - b. Remove all sediment controls and limit of work fencing;
 - c. Submit electronic versions of SWPPP reports;
 - d. Submit a completed **Request for a Certificate of Compliance** (WPA Form 8A);
 - e. Submit an **As-Built Plan**, signed and stamped by a registered professional engineer or registered land surveyor, that includes but is not limited to, all final work completed in compliance with the

proposed and approved work listed in the Notice of Intent, all regrading, visual barriers, and Resource Areas; and

- f. Submit a **letter** from the registered professional engineer or registered land surveyor describing compliance with this Order of Conditions and explain any deviations from the approved plan.

H. In Perpetuity

The following conditions are ongoing, shall survive the expiration of this Order, and shall be included as continuing conditions in perpetuity on the Certificate of Compliance:

38. **Dumping Prohibited.** There shall be no dumping of leaves, grass clippings, brush, or other debris into the wetlands, or the 25 Foot No Disturbance Zone.
39. **Additional Alteration Prohibited.** There shall be no additional alterations of areas under Commission jurisdiction without the required review and permit(s).
40. **Landscaping - No Invasive Plants.** Landscaping shall not consist of any exotic invasive plant including species of Euonymus (Burning Bush, winged euonymus etc.), Japanese barberry or any species identified on the Prohibited Plant List distributed by the Mass Department of Agricultural Resources (<https://www.mass.gov/massachusetts-prohibited-plant-list>).
41. **No pesticides, herbicides, fungicides, and fertilizers** shall be used within one hundred (100) feet of any wetland, pond, or bordering land subject to flooding. Organic pesticides, herbicides, fungicides and fertilizers may be used subject to the review and approval of the Commission.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
250-1177
MassDEP File #

eDEP Transaction #
Norton
City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☐ Yes ☒ No
2. The Norton hereby finds (check one that applies):
Conservation Commission

- a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. ☐ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

250-1177

MassDEP File #

eDEP Transaction #

Norton

City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

4/30/2025

1. Date of Issuance

Please indicate the number of members who will sign this form.

5

This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

DULY AUTHORIZED BY MGL C.110G AND RECORDED AT THE BRISTOL COUNTY
 NORTH REGISTRY OF DEEDS IN BOOK 25893 PAGE 298 ON APRIL 23, 2020.

/S/ Julian Kadish

Signature

Julian Kadish

Printed Name

/S/ Marc Fernandes

Signature

Marc Fernandes

Printed Name

/S/ Paxton Halsall

Signature

Paxton Halsall

Printed Name

/S/ Joseph Carvalho

Signature

Joseph Carvalho

Printed Name

/S/ Daniel Pearson

Signature

Daniel Pearson

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

☐ by hand delivery on

☒ by certified mail, return receipt
 requested, on

4/30/2025

Date

Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

250-1177

MassDEP File #

eDEP Transaction #

Norton

City/Town

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

250-1177

MassDEP File #

eDEP Transaction #

Norton

City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Norton

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for:

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

DEP File Number:

250-1177

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Request Information

1. Location of Project

a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

City/Town

State

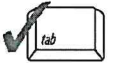
Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



B. Instructions

1. When the Departmental action request is for (check one):

☐ Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)

☐ Superseding Determination of Applicability – Fee: \$120

☐ Superseding Order of Resource Area Delineation – Fee: \$120



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

DEP File Number:

**Request for Departmental Action Fee
Transmittal Form**

250-1177

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <https://www.mass.gov/service-details/massdep-regional-offices-by-community>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

ITEM M-003 STONE RIP-RAP

DESCRIPTION

003-1.1 This item shall consist of work associated with the construction of stone rip-rap embankments and stone rip-rap protection at the inlet and outlets of the culverts and drainage outfalls.

003-1.2 COMPLIANCE WITH PERMITS, LAWS, RULES AND REGULATIONS. The Contractor shall be responsible for following Permits, Laws, Rules and Regulations that have jurisdiction over the proposed work.

MATERIALS

003-2.1 STONE RIP-RAP. Stone rip-rap shall be a sound hard quarry stone with at least two (2) fractured angular faces. The stone shall not fracture when dropped fifteen (15) feet onto other quarry stone. The stone shall be clean and free of vegetation (particularly invasive species), dirt, debris and other objectionable and foreign material. When a size stone is specified, at least fifty percent (50%) of the stone shall be of the size indicated or larger, when measured in three (3) directions (length, width, and depth). The remainder of the stone may be smaller fractured stone that shall be used to fill voids between the larger rocks.

003-2.2 BEDDING MATERIAL. Bedding material for the stone rip-rap shall be one- and one-half inches (1 ½") crushed stone or gravel. Bedding material shall be in accordance with ASTM C 136 and meet the gradation as shown in Table 1.

Table 1

Sieve Designation (square openings)	1-½ Inch Crushed Stone Bedding Material
2 inch	100
1-1/2 inch	100
1 inch	95 - 100
3/4 inch	35 - 75
3/8 inch	10 - 30
No. 4	0 - 5

003-2.3 GEOTEXTILE FABRIC. Geotextile fabric used in conjunction with stone rip-rap, stone ground cover, weed barriers, and other installations requiring a woven geotextile shall consist of high tenacity polypropylene yarns woven into a network, such that the yarns retain their relative position. The fabric shall be inert to biological degradation and resistant to naturally encountered

chemicals. Fabric for this application shall meet the mechanical properties of Mirafi® 140N or an approved equal.

003-2.4 STAPLES. Staples used to tack geotextile fabric shall be galvanized steel wire staples at least four inches (4") in length and a minimum thickness of 3/16".

003-2.5 SHOP DRAWINGS AND CERTIFICATIONS. The Contractor shall submit manufacturer's Shop Drawings on the geotextile fabric and submit gradation reports on the rip-rap bedding material. The Contractor shall provide a 15 CY load of rip-rap stone delivered to the job site for review and approval by the Engineer.

CONSTRUCTION METHODS

003-3.1 GENERAL. The Contractor shall construct rip-rap embankments and rip-rap inlets and outfalls as detailed on the Plans, as specified herein, and as directed by the Engineer. Areas to be rip-rapped shall be staked out and marked by the Contractor. No clearing or excavation shall take place until the Engineer has approved the limits to be rip-rapped.

003-3.2 CLEARING AND GRUBBING. Prior to construction, areas to be rip-rapped shall be cleared and grubbed to the lines and limits shown on the plans, as specified in Specifications section P-151.

003-3.3 EXCAVATION. The Contractor shall excavate to the dimension line and grade as shown on the Plans, as directed by the Engineer, and as specified in Specifications section P-152. The Contractor shall be responsible for all dewatering, shoring, sheathing and erosion and sedimentation control that is required for excavation in order to place the rip-rap stone.

003-3.4 SUBGRADE PREPARATION. Prior to placing the geotechnical fabric, the Contractor shall fine grade the subgrade to conform to the line and grade as required to install the rip-rap to the desired finish elevations. Care shall be used as to not disturb subgrade soils.

003-3.5 GEOTEXTILE FABRIC. The geotextile fabric shall be installed horizontal or perpendicular to the direction of flow. The fabric shall also be installed starting at the lowest point and working toward the highest point, overlapping each preceding course by twelve inches (12") (similar to roofing a house). The fabric shall be anchored with staples placed every eighteen inches (18") on center.

003-3.6 RIP-RAP BEDDING. To protect the geotextile fabric from being punctured or damaged during the placement of the rip-rap, bedding material shall be placed between the fabric and the rip-rap to the depth indicated on the Plans. If no dimension is indicated, six (6) inches of bedding material shall be used.

003-3.7 PLACEMENT OF RIP-RAP. The Contractor shall place rip-rap using a combination of mechanical and hand labor. The larger stones shall be uniformly placed with the smaller stones used to fill the voids. The placement of the stones shall follow the line and grade as shown on the Plans or as directed by the Engineer. After the stones have been placed, the Contractor shall wash the area with water.

METHOD OF MEASUREMENT

003-4.1 STONE RIP-RAP. The quantity of stone rip-rap shall not be measured separately for payment, but shall be considered incidental to the items requiring the rip-rap, completed and accepted in its constructed position, including, but not limited to, excavation, dewatering, shoring or

sheeting if required, bedding material, clearing and grubbing, stone rip-rap material, geotextile fabric, and other incidentals as required to place stone rip-rap to the satisfaction of the Engineer.

BASIS OF PAYMENT

003-5.1 STONE RIP-RAP. Separate payment shall not be made for the stone rip-rap. Materials, equipment, labor, tools, and incidentals that are necessary to complete the work described herein shall be incidental to the item requiring it.

END OF ITEM M-003

ITEM C-100 CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

100-1 GENERAL. Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

- a. Provide qualified personnel to develop and implement the CQCP.
- b. Provide for the production of acceptable quality materials.
- c. Provide sufficient information to assure that the specification requirements can be met.
- d. Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR or Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

- a. Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.
- b. Discussion of the QA program.
- c. Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.
- d. Establish regular meetings to discuss control of materials, methods and testing.
- e. Establishment of the overall QC culture.

100-2 DESCRIPTION OF PROGRAM.

a. GENERAL DESCRIPTION. The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.

b. CONTRACTOR QUALITY CONTROL PROGRAM (CQCP). The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least 10 calendar days before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff
2. Project progress schedule
3. Submittals schedule
4. Inspection requirements
5. QC testing plan
6. Documentation of QC activities and distribution of QC reports
7. Requirements for corrective action when QC and/or QA acceptance criteria are not met
8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

100-3 CQCP ORGANIZATION. The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all QC staff by name and function, and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The organizational chart shall

indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

a. PROGRAM ADMINISTRATOR. The Contractor Quality Control Program Administrator (CQCPA) must be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

- (1) Professional Engineer with one (1) year of airport paving experience.
- (2) Engineer-in-training with two (2) years of airport paving experience.
- (3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience.
- (4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. QC TECHNICIANS. A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher, and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

- (1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.
- (2) Performance of all QC tests as required by the technical specifications and paragraph 100-8.
- (3) Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. STAFFING LEVELS. The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match

the type and pace of work activity. The CQCP shall state where different technicians will be required for different work elements.

100-4 PROJECT PROGRESS SCHEDULE. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, Execution and Progress.

100-5 SUBMITTALS SCHEDULE. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

- a. Specification item number
- b. Item description
- c. Description of submittal
- d. Specification paragraph requiring submittal
- e. Scheduled date of submittal

100-6 INSPECTION REQUIREMENTS. QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

- a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these and other QC functions will be accomplished and used.
- b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

100-7 CONTRACTOR QC TESTING FACILITY.

a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials:

- 8.1.3 Equipment Calibration and Checks;
- 8.1.9 Equipment Calibration, Standardization, and Check Records;
- 8.1.12 Test Methods and Procedures

b. For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation:

- 7 Test Methods and Procedures
- 8 Facilities, Equipment, and Supplemental Procedures

100-8 QC TESTING PLAN. As a part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes.

The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

- a. Specification item number (e.g., P-401)
- b. Item description (e.g., Hot Mix Asphalt Pavements)
- c. Test type (e.g., gradation, grade, asphalt content)
- d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)
- e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)
- f. Responsibility (e.g., plant technician)
- g. Control requirements (e.g., target, permissible deviations)

The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.

All QC test results shall be documented by the Contractor as required by paragraph 100-9.

100-9 DOCUMENTATION. The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCPA.

Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

- a. **DAILY INSPECTION REPORTS.** Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's

daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:

- (1) Technical specification item number and description
- (2) Compliance with approved submittals
- (3) Proper storage of materials and equipment
- (4) Proper operation of all equipment
- (5) Adherence to plans and technical specifications
- (6) Summary of any necessary corrective actions
- (7) Safety inspection.

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

b. DAILY TEST REPORTS. The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

- (1) Technical specification item number and description
- (2) Test designation
- (3) Location
- (4) Date of test
- (5) Control requirements
- (6) Test results
- (7) Causes for rejection
- (8) Recommended remedial actions
- (9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

100-10 CORRECTIVE ACTION REQUIREMENTS. The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

100-11 INSPECTION AND/OR OBSERVATIONS BY THE RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

100-12 NONCOMPLIANCE.

a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

- (1)** Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or
- (2)** Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

100-13 BASIS OF MEASUREMENT AND PAYMENT. Contractor Quality Control Program (CQCP) is for the personnel, tests, facilities and documentation required to implement the CQCP. The CQCP will be paid as a lump sum with the following schedule of partial payments:

- a.** With first pay request, 25% with approval of CQCP and completion of the Quality Control (QC)/Quality Assurance (QA) workshop.
- b.** When 25% or more of the original contract is earned, an additional 25%.
- c.** When 50% or more of the original contract is earned, an additional 20%.
- d.** When 75% or more of the original contract is earned, an additional 20%
- e.** After final inspection and acceptance of project, the final 10%.

BASIS OF PAYMENT

100-14 PAYMENT WILL BE MADE UNDER:

Item C-100-1 Contractor Quality Control Program (CQCP) – 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.

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)

ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials

END OF ITEM C-100

ITEM C-102 TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL

DESCRIPTION

102-1. This item shall consist of temporary control measures as shown on the plans or as ordered by the Resident Project Representative (RPR) during the life of a contract to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary erosion control shall be in accordance with the approved erosion control plan; the approved Construction Safety and Phasing Plan (CSPP) and AC 150/5370-2, Operational Safety on Airports During Construction. The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be designed, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

MATERIALS

102-2.1 GRASS. Grass that will not compete with the grasses sown later for permanent cover per Item T-901 shall be a quick-growing species (such as ryegrass, Italian ryegrass, or cereal grasses) suitable to the area providing a temporary cover. Selected grass species shall not create a wildlife attractant.

102-2.2 MULCHES. Mulches may be hay, straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of noxious weeds and deleterious materials per Item T-908. Mulches shall not create a wildlife attractant.

102-2.3 FERTILIZER. Fertilizer shall be a standard commercial grade and shall conform to all federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

102-2.4 SLOPE DRAINS. Not Used.

102-2.5 SILT FENCE. Not Used.

102-2.6 OTHER. All other materials shall meet commercial grade standards and shall be approved by the RPR before being incorporated into the project.

- a. Compost Filter Tube.** Compost Filter Tube shall be a minimum eight-inch (8") diameter encased sedimentation control device. The Compost Filter Tube may be either pre-manufactured in designated lengths or manufactured ("blown in") on-site. The

encasement shall be a minimum 5mm thick continuous HDPE filament, tubular knitted mesh filter sock netting with 3/8" openings. The Compost Filter Tube shall be Silt Soxx™ as manufactured by Filtrexx®, or an approved equivalent. Compost shall consist of compost media that has been certified by the U.S. Composting Council's Seal of Testing Assurance Program, meeting the following specifications:

Factor	Acceptable Range
pH	5.0–8.5
Moisture Content	< 60%
Organic Matter	> 25%, dry weight
Particle size	99 % passing 2-in. sieve 30 – 50% passing 3/8-in. sieve
Physical contaminants	< 1%, dry weight

- b. Wood Stakes.** Wood stakes shall be manufactured from oak or other hardwood, with one end sharpened to facilitate their installation. They be two inches (2") by two inches (2"), with a length sufficient to secure the Compost Filter Tube.

CONSTRUCTION REQUIREMENTS

102-3.1 GENERAL. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The RPR shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

102-3.2 NPDES CONSTRUCTION GENERAL PERMIT.

a. To obtain coverage under the Construction General Permit (CGP), a complete and accurate Notice of Intent (NOI) shall be prepared and submitted to the Environmental Protection Agency (EPA) by the Contractor and all applicable Subcontractors. The Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit it to the Engineer for review and approval. Once finalized and approved, the Contractor shall prepare and file the NOI for coverage under the CGP.

b. The Owner, Contractor, and all applicable Subcontractors are equally responsible for complying with the terms of the CGP and for the effective implementation of the SWPPP. Implementation of the SWPPP must begin at the commencement of construction activity and must be fully and continually implemented until final stabilization of the site is complete. Whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of stormwater pollutants, the SWPPP must be amended by the Contractor. For the project, the Contractor and all Subcontractors shall operate as the Owner's agent in the implementation and maintenance of the SWPPP.

c. Upon final stabilization of the project site, a Notice of Termination (NOT) must be prepared and submitted to EPA by the contractor.

- d. A copy of the SWPPP and all applicable records, reports, forms, certification statements, and the NOIs must be kept at the jobsite and shall be maintained by the Contractor at all times.
- e. As discussed in the SWPPP, a sign shall be erected at the site entrance to post the NOI and applicable portions of the SWPPP and permit documents. No separate compensation will be made for construction, maintenance, and removal/off-site disposal of the sign.

102-3.3 STORMWATER POLLUTION PREVENTION PLAN (SWPPP). The Stormwater Pollution Prevention Plan (SWPPP) shall be prepared, stamped, and signed by the Licensed Professional Engineer in the Commonwealth of Massachusetts qualified to prepare erosion and sediment control plans, hereinafter called the "Preparer". Collaboration with other professionals such as soil scientists, geologists, and environmentalists may be required as appropriate.

Qualifications for the Plan Preparer shall include a minimum of five (5) years' experience or knowledge of highway and bridge construction operations, with knowledge of methods of construction, demonstrated knowledge of erosion and sediment control, and stormwater management measures. The Preparer shall have previously submitted accepted plans under the National Pollutant Discharge Elimination System permit program.

Qualifications for the Plan Monitor shall include a minimum of two (2) years' experience or knowledge of highway and bridge construction with knowledge of methods of construction, demonstrated field knowledge of erosion control measures; their design, effectiveness, and maintenance requirements.

The Contractor shall submit the name and qualifications of the person(s) or firm proposed to prepare and monitor the Plan for approval prior to preparing the Plan. Submittal of the name and qualifications will be accepted after the opening of bids.

The Plan shall be developed using a combination of structural, non-structural, and vegetative Best Management Practices (BMPs) to adequately control erosion and sedimentation and manage stormwater, as recommended in this Specification and in accordance with the Standard Specifications or shown on the Plans. The Plan shall contain a narrative, Plan drawings and design calculations, design typicals, and Specifications associated with the Contractor's proposed construction phasing.

The narrative shall contain site-specific information describing existing site(s) conditions, description of the project, soils, and environmentally sensitive areas. A discussion of the various erosion and sediment control and stormwater management BMPs, the stabilization methods for temporary measures, a schedule of construction phasing, and a schedule for monitoring and maintaining the Plan shall also be included. BMPs for seasonal (i.e. cold weather/frozen ground) applications shall be identified. The construction phasing shall address the various erosion and sediment control and stormwater management measures to be implemented at each phase of construction. Phases shall be as shown on the Plans or as indicated by the Contractor's approved schedule of operations.

Drawings will show the construction site(s) conditions prior to and after construction by including property lines, right-of-way lines, easement, existing and new structures, drainage, flood plains, wetlands, limits of clearing and grading, proposed final drainage, detours, permanent erosion and sediment control measures, and other critical items. The Contractor's Plan drawings shall show temporary drainage and erosion and sediment control measures for the construction site(s) on the Contract Plans. Additionally, the Contractor shall provide Plans showing all of the above items for proposed areas related to the construction site(s) not shown on the Contract Plans, including but

not limited to: access and haul roads, equipment and material storage sites, material pits, material processing sites, and disposal areas, except municipally authorized landfill areas and commercial sites. Waste materials are quite often materials unsuitable for embankment construction and generally very susceptible to erosion; therefore, the Contractor shall pay close attention to controlling erosion of these materials.

Additional design typicals illustrating practices for erosion and sediment control not shown on the Department Plans shall be included in the Plan. Calculations shall be included to verify all erosion and sediment control and stormwater management practices such as, but not limited to; sediment retention and detention basins, energy dissipaters, diversions, waterways, and control of runoff.

The Preparer or the Preparer's designated representative shall assist the Contractor in implementing the Plan, monitor the site for compliance with the Plan and recommend modifications to the Plan for changing operations or inadequate erosion and sediment control and stormwater management measures. The Preparer shall make modifications to the Plan as necessary and resubmit for review and approval. Review time of modifications will be within ten (10) working days of submittal.

The Engineer may order modifications to the Plan for changing operations or for inadequate erosion and sediment control and stormwater management measures. Changes and/or modifications shall be noted by the Plan Preparer on the approved Plan located at the project site.

Project work may be suspended, wholly or in part, with no extension of time or additional compensation for failure to implement and maintain the approved Plan, including modifications.

102-3.4 SCHEDULE. Prior to the start of construction, the Contractor shall submit schedules in accordance with the approved Construction Safety and Phasing Plan (CSPP) and the plans for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the RPR.

102-3.5 CONSTRUCTION DETAILS. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the plans and approved CSPP. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately if project conditions permit. Temporary erosion control measures are required if permanent measures cannot immediately follow grading operations. The RPR shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the RPR.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the RPR. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the RPR, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The RPR may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be maintained by the Contractor during the construction period.

Provide temporary structures whenever construction equipment must cross watercourses at frequent intervals. Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

102-3.6 INSTALLATION, MAINTENANCE, AND REMOVAL OF COMPOST FILTER TUBE. Compost Filter Tubes shall be installed as shown on the Plans or as directed by the Engineer. No digging or trenching is permitted during the installation of the Compost Filter Tubes. Compost Filter Tubes shall be installed by placing the filter tube as indicated on the Plans and securing with wood stakes. **The wood stakes shall be placed adjacent to the downstream side of the filter tube and shall not be driven through the filter tube itself.** Wood stakes shall be placed not more than five feet (5') apart. Spacing may be increased within more level areas at the discretion of the Engineer. Maintenance of the Compost Filter Tube shall include periodic removal of accumulated fines and silt as directed by the Engineer to maintain the proper function of the Compost Filter Tube. Sections of Compost Filter Tube that become torn or separated from the wood stakes shall be replaced. The Contractor shall be responsible to ensure the Compost Filter Tube is functioning properly and is maintained in proper condition during construction and the growing period of grassed areas.

No separate measurement for payment will be made for the wood stakes required for Compost Filter Tube installation; rather, this material and the required labor shall be considered incidental to the installation of the Compost Filter Tube.

After all work areas have been fully stabilized, the Contractor shall remove the Compost Filter Tube to the maximum extent practicable. This includes removal of the wood stakes and the mesh netting. In areas designated residential clearing, compost material shall be raked and removed from the site. In areas other than those designated residential clearing, compost material may remain on-site, but shall be scattered about such that no piles or berms remain.

No separate measurement for payment will be made for the maintenance, repair, replacement, removal, or disposal of Compost Filter Tube during and after construction (and the growing period); rather, this work shall be considered incidental to the original installation of the Compost Filter Tube.

METHOD OF MEASUREMENT

102-4.1 Temporary erosion and pollution control work required will be performed as scheduled or directed by the RPR. Completed and accepted work will be measured as follows:

- a. Installation and removal of compost filter tube will be measured by the linear foot.

102-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor.

102-4.3 To obtain coverage under the Construction General Permit (CGP), a complete and accurate Notice of Intent (NOI) shall be prepared and submitted to the Environmental Protection Agency (EPA) by the Contractor and all applicable Subcontractors. The Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit it to the Engineer for review and approval. Once finalized and approved, the Contractor shall prepare and file the NOI for coverage under the CGP. This shall be considered incidental to the SWPPP.

102-4.4 Pollution Prevention Plan (SWPPP) to be paid for shall be measured as a single lump sum item including, but not limited to, preparing, implementing, filing NOI, filing NOT, monitoring, reporting, meetings, SWPPP revisions, providing turbidity meter, and all other actions and incidental items required to meet the SWPPP requirements for coverage under the NPDES CGP to the satisfaction of the Engineer. The bid item for Stormwater Pollution Prevention Plan (SWPPP) shall be a lump sum quantity.

Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor.

BASIS OF PAYMENT

102-5.1 STORMWATER POLLUTION PREVENTION PLAN (SWPPP). Payment shall be made at the Contract lump sum price measured as specified above, and price and payment thereof shall constitute full compensation for all labor, materials, equipment, incidentals and expenses necessary for the satisfactory completion of the Item “Stormwater Pollution Prevention Plan (SWPPP)”.

Payment shall be made for this item as follows:

- 30% of the lump sum price for this item will be paid after the Contractor submits a SWPPP and files the US EPA Notice of Intent (NOI) for coverage under Construction General Permit (CGP) for the project.
- 60% of the lump sum price for this item will be paid for monitoring and reporting requirements of the SWPPP. The 60% of the lump sum price shall be pro-rated over the duration of the project, based upon contract time and calendar days used.
- 10% of the lump sum price for this item, or the remainder, whichever is more, will be paid upon approved final stabilization of the site and receipt of a copy of the Contractor’s US EPA Notice of Termination (NOT).

102-5.2 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the RPR and measured as provided in paragraph 102-4.1 and 4.2 will be paid for under:

Item C-102-1	Installation and Removal of Compost Filter Tube – per Linear Foot
Item C-102-2	Stormwater Pollution Prevention Plan (SWPPP) – per Lump Sum

Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

Temporary control features not covered by contract items that are ordered by the RPR will be paid for in accordance with Section 90, paragraph 90-05 Payment for Extra Work.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5200-33	Hazardous Wildlife Attractants on or Near Airports
AC 150/5370-2	Operational Safety on Airports During Construction

ASTM International (ASTM)

ASTM D6461	Standard Specification for Silt Fence Materials
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United States Department of Agriculture (USDA)

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM C-102

ITEM C-105 MOBILIZATION

105-1 DESCRIPTION. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 MOBILIZATION LIMIT. Mobilization shall be limited to 10 percent of the total project cost.

105-3 POSTED NOTICES. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 ENGINEER/RPR FIELD OFFICE. The Contractor shall provide dedicated space for the use of the field RPR and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity in accordance with local building codes. See Item M-001 for Engineer's Field Equipment requirements.

The field office shall have a minimum floor area of 250 square feet, shall include an office with lockable door, and a conference room suitable for project meetings. The conference room shall be equipped with a table and seating for eight (8) people and shall be equipped with the following:

- 1 – Standard sized flat-top desk
- 1 – Desk chair
- 1 – Drafting table at least 36" wide by 48" long
- 1 – Drafting stool
- 1 – Lockable 2-drawer file cabinet
- 1 – Trash barrel with lid
- 1 – Broom with dust pan

105-5 ENGINEER/RPR FIELD EQUIPMENT. The contractor shall provide for the use of the field engineer/RPR the following items:

- 2 – Two-way radios set to the Contractor's communication frequency
- 2 – Hand-held aviation radios for two-way communications with the Mansfield Municipal Airport CTAF/UNICOM frequency of 123.0 MHz. The radios shall be handheld units, supplied new, with spare batteries, exterior antennas, and battery chargers.
- 1 – Office copier/printer with self-feed capabilities to scan multiple pages as well as single sheets in both 8.5" x 11" and 11" x 17" sizes. The printer shall also be capable of printing sheets of both sizes.

- 1 – High speed wireless internet connection. The internet connection shall be provided in the form of a mobile broadband hotspot, from a provider with adequate reception at the Mansfield Municipal Airport, for portable use.

The Engineer/RPR field office and equipment shall be provided prior to the start of construction and shall be maintained by the Contractor for the duration of construction. Any incidental expenses which may be necessary to maintain a fully functional field office including, but not limited to, utility services, water services, high speed wireless internet service, ink cartridges, and any other required items shall be considered incidental to Item C-105.

The Contractor shall be responsible for maintenance, repair, and loss of all equipment provided for the duration of the Contract. At the completion of the Contract, all the equipment required for the Engineer's field office shall be retained by the Contractor.

Prior to removal of the Engineer's Field Office, the Contractor shall give the Engineer ten (10) days written notice to allow the Engineer to remove any possessions from the trailer. If the Contractor removes the Engineer's Field Office prior to the ten (10) day notice period, they shall be responsible for all costs to replace or reproduce anything lost or destroyed from the Engineers field office.

METHOD OF MEASUREMENT

105-6 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, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. 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%.

The work involved in providing, installing and maintaining the Engineer's Field Office will be measured as a single item including furnishing and installation of the structure, furnishings and utilities, removal and restoration of the site upon completion of the work. The payment will be made per the following schedule:

- a. 25% upon the Contractor supplying all the required items specified above, complete and in working order.
- b. The remaining 75% shall be pro-rated over the duration of the project.

If the Contractor fails to supply any of the above specified items within the first five (5) days of the Contract, a deduction will be made in the payment equal to the item bid amount divided by the Contract time, for each and every day that any of the specified items are not supplied and useable as intended.

If the Contractor fails to supply any of the above-specified items within the first five (5) days of the Contract, a deduction will be made in the payment equal to the item bid amount divided by the Contract Time, for each and every day that any of the specified items are not useable as intended

BASIS OF PAYMENT

105-7 PAYMENT WILL BE MADE UNDER:

Item C-105-1 Mobilization – per Lump Sum

Item C-105-2 Engineer/RPR Field Office and Equipment – 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 C-110 METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS (PWL)

110-1 GENERAL. When the specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (\bar{X}) and sample standard deviation (S_n) of the specified number (n) of sublots for the lot and the specification tolerance limits, L for lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index, Q_L for Lower Quality Index and/or Q_U for Upper Quality Index, is computed and the PWL for the lot for the specified n is determined from Table 1. All specification limits specified in the technical sections shall be absolute values. Test results used in the calculations shall be to the significant figure given in the test procedure.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the Contractor that, in order to consistently offset the Contractor's risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. In all cases, it is the responsibility of the Contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

110-2 METHOD FOR COMPUTING PWL. The computational sequence for computing PWL is as follows:

- a. Divide the lot into n sublots in accordance with the acceptance requirements of the specification.
- b. Locate the random sampling position within the subplot in accordance with the requirements of the specification.
- c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.
- d. Find the sample average (\bar{X}) for all subplot test values within the lot by using the following formula:

$$\bar{X} = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

Where: \bar{X} = Sample average of all subplot test values within a lot

x_1, x_2, \dots, x_n = Individual subplot test values

n = Number of subplot test values

e. Find the sample standard deviation (S_n) by use of the following formula:

$$S_n = [(d_1^2 + d_2^2 + d_3^2 + \dots + d_n^2)/(n-1)]^{1/2}$$

Where: S_n = Sample standard deviation of the number of subplot test values in the set

d_1, d_2, \dots, d_n = Deviations of the individual subplot test values x_1, x_2, \dots from the average value \bar{X}

that is: $d_1 = (x_1 - \bar{X}), d_2 = (x_2 - \bar{X}) \dots d_n = (x_n - \bar{X})$

n = Number of subplot test values

f. For single sided specification limits (i.e., L only), compute the Lower Quality Index Q_L by use of the following formula:

$$Q_L = (X - L) / S_n$$

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L , using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

g. For double-sided specification limits (i.e., L and U), compute the Quality Indexes Q_L and Q_U by use of the following formulas:

$$Q_L = (X - L) / S_n$$

and

$$Q_U = (U - X) / S_n$$

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U , using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_L and percent of material below P_U for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher value of P_L or P_U . Determine the PWL by use of the following formula:

$$PWL = (P_U + P_L) - 100$$

Where: P_L = percent within lower specification limit

P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project

Test Item: Item P-401, Lot A.

A. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.

$$A-1 = 96.60$$

$$A-2 = 97.55$$

$$A-3 = 99.30$$

$$A-4 = 98.35$$

$$n = 4$$

2. Calculate average density for the lot.

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

$$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$$

$$X = 97.95\% \text{ density}$$

3. Calculate the standard deviation for the lot.

$$S_n = [((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(1.82 + 0.16 + 1.82 + 0.16) / 3]^{1/2}$$

$$S_n = 1.15$$

4. Calculate the Lower Quality Index Q_L for the lot. ($L=96.3$)

$$Q_L = (X - L) / S_n$$

$$Q_L = (97.95 - 96.30) / 1.15$$

$$Q_L = 1.4348$$

5. Determine PWL by entering Table 1 with $Q_L = 1.44$ and $n = 4$.

$$PWL = 98$$

B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.

$$A-1 = 5.00$$

$$A-2 = 3.74$$

$$A-3 = 2.30$$

$$A-4 = 3.25$$

2. Calculate the average air voids for the lot.

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

$$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$$

$$X = 3.57\%$$

3. Calculate the standard deviation S_n for the lot.

$$S_n = [((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(2.04 + 0.03 + 1.62 + 0.10) / 3]^{1/2}$$

$$S_n = 1.12$$

4. Calculate the Lower Quality Index Q_L for the lot. ($L = 2.0$)

$$Q_L = (X - L) / S_n$$

$$Q_L = (3.57 - 2.00) / 1.12$$

$$Q_L = 1.3992$$

5. Determine P_L by entering Table 1 with $Q_L = 1.41$ and $n = 4$.

$$P_L = 97$$

6. Calculate the Upper Quality Index Q_U for the lot. ($U = 5.0$)

$$Q_U = (U - X) / S_n$$

$$Q_U = (5.00 - 3.57) / 1.12$$

$$Q_U = 1.2702$$

7. Determine P_U by entering Table 1 with $Q_U = 1.29$ and $n = 4$.

$$P_U = 93$$

8. Calculate Air Voids PWL

$$PWL = (P_L + P_U) - 100$$

$$PWL = (97 + 93) - 100 = 90$$

EXAMPLE OF OUTLIER CALCULATION (REFERENCE ASTM E178)

Project: Example Project

Test Item: Item P-401, Lot A.

A. Outlier Determination for Mat Density.

1. Density of four random cores taken from Lot A arranged in descending order.

$$A-3 = 99.30$$

$$A-4 = 98.35$$

$$A-2 = 97.55$$

$$A-1 = 96.60$$

2. From ASTM E178, Table 1, for $n=4$ an upper 5% significance level, the critical value for test criterion = 1.463.

3. Use average density, standard deviation, and test criterion value to evaluate density measurements.

- a. For measurements greater than the average:

If $(\text{measurement} - \text{average}) / (\text{standard deviation})$ is less than test criterion, then the measurement is not considered an outlier.

For A-3, check if $(99.30 - 97.95) / 1.15$ is greater than 1.463.

Since 1.174 is less than 1.463, the value is not an outlier.

- b. For measurements less than the average:

If $(\text{average} - \text{measurement}) / (\text{standard deviation})$ is less than test criterion, then the measurement is not considered an outlier.

For A-1, check if $(97.95 - 96.60) / 1.15$ is greater than 1.463.

Since 1.135 is less than 1.463, the value is not an outlier.

Note: In this example, a measurement would be considered an outlier if the density were:

Greater than $(97.95 + 1.463 \times 1.15) = 99.63\%$

OR

less than $(97.95 - 1.463 \times 1.15) = 96.27\%$.

Table 1. Table for Estimating Percent of Lot Within Limits (PWL)

Percent Within Limits (P_L and P_U)	Positive Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
99	1.1541	1.4700	1.6714	1.8008	1.8888	1.9520	1.9994	2.0362
98	1.1524	1.4400	1.6016	1.6982	1.7612	1.8053	1.8379	1.8630
97	1.1496	1.4100	1.5427	1.6181	1.6661	1.6993	1.7235	1.7420
96	1.1456	1.3800	1.4897	1.5497	1.5871	1.6127	1.6313	1.6454
95	1.1405	1.3500	1.4407	1.4887	1.5181	1.5381	1.5525	1.5635
94	1.1342	1.3200	1.3946	1.4329	1.4561	1.4717	1.4829	1.4914
93	1.1269	1.2900	1.3508	1.3810	1.3991	1.4112	1.4199	1.4265
92	1.1184	1.2600	1.3088	1.3323	1.3461	1.3554	1.3620	1.3670
91	1.1089	1.2300	1.2683	1.2860	1.2964	1.3032	1.3081	1.3118
90	1.0982	1.2000	1.2290	1.2419	1.2492	1.2541	1.2576	1.2602
89	1.0864	1.1700	1.1909	1.1995	1.2043	1.2075	1.2098	1.2115
88	1.0736	1.1400	1.1537	1.1587	1.1613	1.1630	1.1643	1.1653
87	1.0597	1.1100	1.1173	1.1192	1.1199	1.1204	1.1208	1.1212
86	1.0448	1.0800	1.0817	1.0808	1.0800	1.0794	1.0791	1.0789
85	1.0288	1.0500	1.0467	1.0435	1.0413	1.0399	1.0389	1.0382
84	1.0119	1.0200	1.0124	1.0071	1.0037	1.0015	1.0000	0.9990
83	0.9939	0.9900	0.9785	0.9715	0.9671	0.9643	0.9624	0.9610
82	0.9749	0.9600	0.9452	0.9367	0.9315	0.9281	0.9258	0.9241
81	0.9550	0.9300	0.9123	0.9025	0.8966	0.8928	0.8901	0.8882
80	0.9342	0.9000	0.8799	0.8690	0.8625	0.8583	0.8554	0.8533
79	0.9124	0.8700	0.8478	0.8360	0.8291	0.8245	0.8214	0.8192
78	0.8897	0.8400	0.8160	0.8036	0.7962	0.7915	0.7882	0.7858
77	0.8662	0.8100	0.7846	0.7716	0.7640	0.7590	0.7556	0.7531
76	0.8417	0.7800	0.7535	0.7401	0.7322	0.7271	0.7236	0.7211
75	0.8165	0.7500	0.7226	0.7089	0.7009	0.6958	0.6922	0.6896
74	0.7904	0.7200	0.6921	0.6781	0.6701	0.6649	0.6613	0.6587
73	0.7636	0.6900	0.6617	0.6477	0.6396	0.6344	0.6308	0.6282
72	0.7360	0.6600	0.6316	0.6176	0.6095	0.6044	0.6008	0.5982
71	0.7077	0.6300	0.6016	0.5878	0.5798	0.5747	0.5712	0.5686
70	0.6787	0.6000	0.5719	0.5582	0.5504	0.5454	0.5419	0.5394
69	0.6490	0.5700	0.5423	0.5290	0.5213	0.5164	0.5130	0.5105
68	0.6187	0.5400	0.5129	0.4999	0.4924	0.4877	0.4844	0.4820
67	0.5878	0.5100	0.4836	0.4710	0.4638	0.4592	0.4560	0.4537
66	0.5563	0.4800	0.4545	0.4424	0.4355	0.4310	0.4280	0.4257
65	0.5242	0.4500	0.4255	0.4139	0.4073	0.4030	0.4001	0.3980
64	0.4916	0.4200	0.3967	0.3856	0.3793	0.3753	0.3725	0.3705
63	0.4586	0.3900	0.3679	0.3575	0.3515	0.3477	0.3451	0.3432
62	0.4251	0.3600	0.3392	0.3295	0.3239	0.3203	0.3179	0.3161
61	0.3911	0.3300	0.3107	0.3016	0.2964	0.2931	0.2908	0.2892
60	0.3568	0.3000	0.2822	0.2738	0.2691	0.2660	0.2639	0.2624
59	0.3222	0.2700	0.2537	0.2461	0.2418	0.2391	0.2372	0.2358
58	0.2872	0.2400	0.2254	0.2186	0.2147	0.2122	0.2105	0.2093
57	0.2519	0.2100	0.1971	0.1911	0.1877	0.1855	0.1840	0.1829
56	0.2164	0.1800	0.1688	0.1636	0.1607	0.1588	0.1575	0.1566
55	0.1806	0.1500	0.1406	0.1363	0.1338	0.1322	0.1312	0.1304
54	0.1447	0.1200	0.1125	0.1090	0.1070	0.1057	0.1049	0.1042
53	0.1087	0.0900	0.0843	0.0817	0.0802	0.0793	0.0786	0.0781
52	0.0725	0.0600	0.0562	0.0544	0.0534	0.0528	0.0524	0.0521

Percent Within Limits (P_L and P_U)	Positive Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
51	0.0363	0.0300	0.0281	0.0272	0.0267	0.0264	0.0262	0.0260
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Percent Within Limits (P_L and P_U)	Negative Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
49	-0.0363	-0.0300	-0.0281	-0.0272	-0.0267	-0.0264	-0.0262	-0.0260
48	-0.0725	-0.0600	-0.0562	-0.0544	-0.0534	-0.0528	-0.0524	-0.0521
47	-0.1087	-0.0900	-0.0843	-0.0817	-0.0802	-0.0793	-0.0786	-0.0781
46	-0.1447	-0.1200	-0.1125	-0.1090	-0.1070	-0.1057	-0.1049	-0.1042
45	-0.1806	-0.1500	-0.1406	-0.1363	-0.1338	-0.1322	-0.1312	-0.1304
44	-0.2164	-0.1800	-0.1688	-0.1636	-0.1607	-0.1588	-0.1575	-0.1566
43	-0.2519	-0.2100	-0.1971	-0.1911	-0.1877	-0.1855	-0.1840	-0.1829
42	-0.2872	-0.2400	-0.2254	-0.2186	-0.2147	-0.2122	-0.2105	-0.2093
41	-0.3222	-0.2700	-0.2537	-0.2461	-0.2418	-0.2391	-0.2372	-0.2358
40	-0.3568	-0.3000	-0.2822	-0.2738	-0.2691	-0.2660	-0.2639	-0.2624
39	-0.3911	-0.3300	-0.3107	-0.3016	-0.2964	-0.2931	-0.2908	-0.2892
38	-0.4251	-0.3600	-0.3392	-0.3295	-0.3239	-0.3203	-0.3179	-0.3161
37	-0.4586	-0.3900	-0.3679	-0.3575	-0.3515	-0.3477	-0.3451	-0.3432
36	-0.4916	-0.4200	-0.3967	-0.3856	-0.3793	-0.3753	-0.3725	-0.3705
35	-0.5242	-0.4500	-0.4255	-0.4139	-0.4073	-0.4030	-0.4001	-0.3980
34	-0.5563	-0.4800	-0.4545	-0.4424	-0.4355	-0.4310	-0.4280	-0.4257
33	-0.5878	-0.5100	-0.4836	-0.4710	-0.4638	-0.4592	-0.4560	-0.4537
32	-0.6187	-0.5400	-0.5129	-0.4999	-0.4924	-0.4877	-0.4844	-0.4820
31	-0.6490	-0.5700	-0.5423	-0.5290	-0.5213	-0.5164	-0.5130	-0.5105
30	-0.6787	-0.6000	-0.5719	-0.5582	-0.5504	-0.5454	-0.5419	-0.5394
29	-0.7077	-0.6300	-0.6016	-0.5878	-0.5798	-0.5747	-0.5712	-0.5686
28	-0.7360	-0.6600	-0.6316	-0.6176	-0.6095	-0.6044	-0.6008	-0.5982
27	-0.7636	-0.6900	-0.6617	-0.6477	-0.6396	-0.6344	-0.6308	-0.6282
26	-0.7904	-0.7200	-0.6921	-0.6781	-0.6701	-0.6649	-0.6613	-0.6587
25	-0.8165	-0.7500	-0.7226	-0.7089	-0.7009	-0.6958	-0.6922	-0.6896
24	-0.8417	-0.7800	-0.7535	-0.7401	-0.7322	-0.7271	-0.7236	-0.7211
23	-0.8662	-0.8100	-0.7846	-0.7716	-0.7640	-0.7590	-0.7556	-0.7531
22	-0.8897	-0.8400	-0.8160	-0.8036	-0.7962	-0.7915	-0.7882	-0.7858
21	-0.9124	-0.8700	-0.8478	-0.8360	-0.8291	-0.8245	-0.8214	-0.8192
20	-0.9342	-0.9000	-0.8799	-0.8690	-0.8625	-0.8583	-0.8554	-0.8533
19	-0.9550	-0.9300	-0.9123	-0.9025	-0.8966	-0.8928	-0.8901	-0.8882
18	-0.9749	-0.9600	-0.9452	-0.9367	-0.9315	-0.9281	-0.9258	-0.9241
17	-0.9939	-0.9900	-0.9785	-0.9715	-0.9671	-0.9643	-0.9624	-0.9610
16	-1.0119	-1.0200	-1.0124	-1.0071	-1.0037	-1.0015	-1.0000	-0.9990
15	-1.0288	-1.0500	-1.0467	-1.0435	-1.0413	-1.0399	-1.0389	-1.0382
14	-1.0448	-1.0800	-1.0817	-1.0808	-1.0800	-1.0794	-1.0791	-1.0789
13	-1.0597	-1.1100	-1.1173	-1.1192	-1.1199	-1.1204	-1.1208	-1.1212
12	-1.0736	-1.1400	-1.1537	-1.1587	-1.1613	-1.1630	-1.1643	-1.1653
11	-1.0864	-1.1700	-1.1909	-1.1995	-1.2043	-1.2075	-1.2098	-1.2115
10	-1.0982	-1.2000	-1.2290	-1.2419	-1.2492	-1.2541	-1.2576	-1.2602
9	-1.1089	-1.2300	-1.2683	-1.2860	-1.2964	-1.3032	-1.3081	-1.3118
8	-1.1184	-1.2600	-1.3088	-1.3323	-1.3461	-1.3554	-1.3620	-1.3670
7	-1.1269	-1.2900	-1.3508	-1.3810	-1.3991	-1.4112	-1.4199	-1.4265
6	-1.1342	-1.3200	-1.3946	-1.4329	-1.4561	-1.4717	-1.4829	-1.4914
5	-1.1405	-1.3500	-1.4407	-1.4887	-1.5181	-1.5381	-1.5525	-1.5635
4	-1.1456	-1.3800	-1.4897	-1.5497	-1.5871	-1.6127	-1.6313	-1.6454
3	-1.1496	-1.4100	-1.5427	-1.6181	-1.6661	-1.6993	-1.7235	-1.7420

Percent Within Limits (P_L and P_U)	Negative Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
2	-1.1524	-1.4400	-1.6016	-1.6982	-1.7612	-1.8053	-1.8379	-1.8630
1	-1.1541	-1.4700	-1.6714	-1.8008	-1.8888	-1.9520	-1.9994	-2.0362

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM E178

Standard Practice for Dealing with Outlying Observations

END OF ITEM C-110

ITEM P-101 PREPARATION/REMOVAL OF EXISTING PAVEMENTS**DESCRIPTION**

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION**101-3.1 REMOVAL OF EXISTING PAVEMENT.**

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. CONCRETE PAVEMENT REMOVAL. Not Used.

b. ASPHALT PAVEMENT REMOVAL. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be incorporated into embankment, it shall meet the following gradation:

Sieve Size	Percent Passing
1½ inch	100
¾ inch	70-100
No. 10	20-100
No. 40	5-60
No. 200	0-15

c. REPAIR OR REMOVAL OF BASE, SUBBASE, AND/OR SUBGRADE. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

101-3.2 PREPARATION OF JOINTS AND CRACKS PRIOR TO OVERLAY/SURFACE TREATMENT. Not Used.

101-3.3 REMOVAL OF FOREIGN SUBSTANCES/CONTAMINATES PRIOR TO OVERLAY, SEAL-COAT, OR REMARKING. Not Used.**101-3.4 CONCRETE SPALL OR FAILED ASPHALTIC CONCRETE PAVEMENT REPAIR.** Not Used.

101-3.5 COLD MILLING. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed of legally, off Airport property. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. PATCHING. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. PROFILING, GRADE CORRECTION, OR SURFACE CORRECTION. The milling machine shall have a minimum width of 7 feet and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of legally, off airport property.

c. CLEAN-UP. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed of legally, off Airport property.

101-3.6. PREPARATION OF ASPHALT PAVEMENT SURFACES PRIOR TO SURFACE TREATMENT. Not Used.

101-3.7 MAINTENANCE. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 PREPARATION OF JOINTS IN RIGID PAVEMENT PRIOR TO RESEALING. Not Used.

101-3.8.1 REMOVAL OF EXISTING JOINT SEALANT. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.

101-3.8.2 CLEANING PRIOR TO SEALING. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 JOINT SEALANT. Joint material and installation will be in accordance with Item P-605.

101-3.9 PREPARATION OF CRACKS IN FLEXIBLE PAVEMENT PRIOR TO SEALING. Not Used.

101-3.9.1 PREPARATION OF CRACK. Not Used.

101-3.9.2 REMOVAL OF EXISTING CRACK SEALANT. Not Used.

101-3.9.3 CRACK SEALANT. Not Used.

101-3.9.4 REMOVAL OF PIPE AND OTHER BURIED STRUCTURES.

a. REMOVAL OF EXISTING PIPE MATERIAL. Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 100% of ASTM D698.

b. REMOVAL OF DRAINAGE STRUCTURES. Where indicated on the plans or as directed by the RPR, drainage structures including, but not limited to, inlets, flared end sections, catch basins, leaching beds, and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 100% of ASTM D698, when outside of paved areas must be compacted to 95% of ASTM D698.

c. REMOVAL OF ELECTRICAL FIXTURES/STRUCTURES. Where indicated on the plans or as directed by the RPR, electrical fixtures/structures including, but not limited to, guidance signs, lights, junction cans, and transformers shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 100% of ASTM D698, when outside of paved areas must be compacted to 95% of ASTM D698.

METHOD OF MEASUREMENT

101-4.1 PAVEMENT REMOVAL. The unit of measurement for pavement removal shall be the number of square yards removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

101-4.2 JOINT AND CRACK REPAIR. Not Used.

101-4.3 REMOVAL OF FOREIGN SUBSTANCES/CONTAMINATES. Not Used.

101-4.4 SPALLED AND FAILED ASPHALT PAVEMENT REPAIR. The unit of measure for failed asphalt pavement repair shall be square foot.

101-4.5 CONCRETE SPALL REPAIR. Not Used.

101-4.6 COLD MILLING. The unit of measure for cold milling shall be two (2) inches of milling per square yard. The location and average depth of the cold milling shall be as shown on the plans. If

the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.

101-4.7 REMOVAL OF BURIED STRUCTURES. The unit of measurement for removal of buried structures, including, but not limited to, electrical and drainage structures, will be made at the contract unit price for each completed and accepted item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4.

101-4.8 REMOVAL OF PIPES/DUCTS. The quantity of pipe/ducts removed shall be the number of linear feet of pipes/ducts removed, computed to the nearest linear foot, regardless of size and type of pipe, measured along the length of pipe as described below.

No payment shall be made for any work related to this specification section until each unit of work has been inspected and accepted by the Engineer. Acceptance and subsequent payment of any unit of work shall be considered full reimbursement for all materials, labor, equipment, work, and incidental expenses required to complete the work as described in paragraph 101-3.9.4.

It shall be understood that removal of ducts containing electrical cables shall not be measured as both duct removal and cable removal, rather cables within ducts scheduled to be removed shall be considered incidental to the duct removal.

It shall be understood that duct removal will be measured once, regardless of the number of ducts present in a duct bank. The minimum distance between adjacent ducts must be at least five (5) feet, in order to be considered for separate payment under the removal item.

BASIS OF PAYMENT

101-5.1 PAYMENT. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-1	Pavement Removal - per square yard
Item P-101-2	Cold Milling – per square yard
Item P-101-3	Removal of Buried Structures – per each
Item P-101-4	Removal of Pipes/Ducts – 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 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.
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ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
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END OF ITEM P-101

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 AND GRUBBING. 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.

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 outside the Airport's limits at the Contractor's responsibility, 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. Not Used.

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 below the existing surrounding ground. Any broken concrete, blocks, or other objectionable material that cannot be used in backfill shall be removed and disposed of at the Contractor's expense. The holes or openings shall be backfilled with acceptable material and properly compacted.

All holes in embankment areas remaining after the grubbing operation shall have the sides of the holes flattened to facilitate filling with acceptable material and compacting as required in Item P-152. The same procedure shall be applied to all holes remaining after grubbing in areas where the depth of holes exceeds the depth of the proposed excavation.

METHOD OF MEASUREMENT

151-3.1 The quantities of clearing and grubbing as shown by the limits on the plans shall be the number of acres or fractions thereof of land specifically cleared and grubbed.

BASIS OF PAYMENT

151-4.1 Payment shall be made at the contract unit price per acre for clearing and grubbing. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-151-1	Clearing and grubbing - per acre or fractions thereof
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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.

152-1.3 UNSUITABLE EXCAVATION. Unsuitable material shall be disposed in designated waste areas as shown on the plans. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR.

CONSTRUCTION METHODS

152-2.1 GENERAL. Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of in waste areas as shown on the plans. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches, to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches in their greatest dimension will not be permitted in the top 6 inches of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

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.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot of the stated elevations for ground surfaces, or within 0.04 foot for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least two weeks before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes as shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. SELECTIVE GRADING. When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. UNDERCUTTING. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport property. 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 12 inches of subgrade shall be compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM 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 (300 mm) 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 RPR or RPR's representative 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.

Density tests will be taken by the RPR or RPR's representative for every 3,000 square yards of compacted embankment for each lift 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 12 inches and to a density of not less than 100 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 RPR or RPR's representative shall perform all density tests. 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. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. Before start of embankment, and after compaction is completed, the subgrade area shall be proof rolled with a 20 ton tandem axle dual wheel dump truck loaded to the legal limit with tires inflated to the manufacturers recommendation in the presence of the RPR. Apply a minimum of four (4) coverages, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch or show permanent deformation greater than 1 inch shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 COMPACTION REQUIREMENTS. The subgrade under areas to be paved shall be compacted to a depth of 12 inches and to a density of not less than 100 percent of the maximum dry density as determined by ASTM D698. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM 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. Tests for moisture content and compaction will be taken at a minimum of 3,000 S.Y. of subgrade. All quality assurance testing shall be done by the RPR or RPR's representative.

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 gauge 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

152-3.1 Measurement for payment specified by the cubic yard shall be computed by the comparison of digital terrain model (DTM) surfaces for computation of neat line design quantities. The end area is that bound by the original ground line established by field cross-sections and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

152-3.2 The quantity of unclassified excavation to be paid for shall be the number of cubic yards measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

152-3.3 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.

BASIS OF PAYMENT

152-4.1 Unclassified excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-152-1	Unclassified Excavation - per cubic yard
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop
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ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2700 kN-m/m ³))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software
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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

ITEM P-154 SUBBASE COURSE

DESCRIPTION

154-1.1 This item shall consist of a subbase course composed of granular materials constructed on a prepared subgrade or underlying course in accordance with these specifications, and in conformity with the dimensions and typical cross-section shown on the plans.

MATERIALS

154-2.1 MATERIALS. The subbase material shall consist of hard durable particles or fragments of granular aggregates. The material may be obtained from gravel pits, stockpiles, or may be produced from a crushing and screening plant with proper blending. The materials from these sources shall meet the requirements for gradation, quality, and consistency. The material shall be free from vegetative matter, excessive amounts of clay, and other objectionable substances; uniformly blended; and be capable of being compacted into a dense, stable subbase.

The subbase material shall exhibit a California Bearing Ratio (CBR) value of at least 20 when tested in accordance with ASTM D1883. The subbase material shall meet the gradation specified in the table below.

Subbase Gradation Requirements

Sieve designation	Percentage by weight passing sieves		Contractor's Final Gradation	Job Control Grading Band Tolerances ¹ (Percent)
	Subbase Aggregate	Recycled pavement (RAP or RCO)		
3 inch	100			0
1 1/2 inch		100		0
3/4 inch	70-100	70-100		±10
No. 10	20-100	20-100		±10
No. 40	5-60	5-60		±5
No. 200	0-10	0-10		±5

¹The "Job Control Grading Band Tolerances" shall be applied to "Contractor's Final Gradation" to establish the job control grading band.

The portion of the material passing the No. 40 sieve shall have a liquid limit of not more than 25 and a plasticity index of not more than six (6) when tested in accordance with ASTM D4318.

154-2.2 SAMPLING AND TESTING.

a. AGGREGATE BASE MATERIALS. Samples shall be taken by the Contractor per ASTM D75 for initial aggregate subbase requirements and gradation. Material shall meet the requirements in paragraphs 154-2.1. The Contractor shall submit to the Resident Project Representative (RPR) certified test results showing that the aggregate meets the Material requirements of this section. Tests shall be representative of the material to be used for the project.

b. GRADATION REQUIREMENTS. The Contractor shall take at least one aggregate subbase sample per day in the presence of the RPR to check the final gradation. Samples shall be taken from the in-place, un-compacted material at sampling locations determined by the RPR on a random basis per ASTM D3665. Sampling shall be per ASTM D75 and tested per ASTM C136 and ASTM C117. Results shall be furnished to the RPR by the Contractor each day during construction. Material shall meet the requirements in paragraph 154-2.1.

154-2.3 SEPARATION GEOTEXTILE. Separation geotextile shall be Class 2; 0.02 sec^{-1} permittivity per ASTM D4491; Apparent opening size per ASTM D4751 with 0.60 mm maximum average roll value.

154-2.4 GEOGRID. Not used.

CONSTRUCTION METHODS

154-3.1 GENERAL. The subbase course shall be placed where designated on the plans or as directed by the RPR. The material shall be shaped and thoroughly compacted within the tolerances specified.

Granular subbases which, due to grain sizes or shapes, are not sufficiently stable to support the construction equipment without movement, shall be mechanically modified to the depth necessary to provide stability as directed by the RPR. The mechanical modification shall include the addition of a fine-grained medium to bind the particles of the subbase material sufficiently to furnish a bearing strength, so the course will not deform under construction equipment traffic.

154-3.2 PREPARING UNDERLYING COURSE. Prior to constructing the subbase course, clean the underlying course or subgrade of all foreign substances. The surface of the underlying course or subgrade shall meet specified compaction and surface tolerances in accordance with Item P-152. Correct ruts, soft yielding spots in the underlying courses, and subgrade areas having inadequate compaction and/or deviations of the surface from the specified requirements, by loosening and removing soft or unsatisfactory material, adding approved material, reshaping to line and grade, and recompacting to specified density requirements. For cohesionless underlying courses or subgrades containing sands or gravels, as defined in ASTM D2487, the surface shall be stabilized prior to placement of the overlying course by mixing the overlying course material into the underlying course, and compacting by approved methods. The stabilized material shall be considered as part of the underlying course and shall meet all requirements for the underlying course. The finished underlying course shall not be disturbed by traffic or other operations and shall be maintained in a satisfactory condition until the overlying course is placed. The underlying course shall be checked and accepted by the RPR before placing and spreading operations are started.

To protect the subgrade and to ensure proper drainage, spreading of the subbase shall begin along the centerline of the pavement on a crowned section or on the high side of pavements with a one-way slope.

154-3.3 CONTROL STRIP. The first half-day of subbase construction shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) 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.

154-3.4 PLACEMENT. The material shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted. The material shall not be placed when the underlying course is soft or yielding.

The material shall meet gradation and moisture requirements prior to compaction. Material may be free-draining and the minimum moisture content shall be established for placement and compaction of the material.

The material shall be constructed in lifts as established in the control strip, but not less than 4 inches nor more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

154-3.5 COMPACTION. The subbase material shall be compacted, adjusting moisture as necessary, to be within $\pm 2\%$ of optimum moisture. The field density of the compacted material shall be at least 100% of the maximum density as specified in paragraph 154-3.9a. If the specified density is not attained, the area of the lift represented by the test shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

154-3.6 WEATHER LIMITATION. Material shall not be placed unless the ambient air temperature is at least 40°F and rising. Work on subbase course shall not be conducted when the subgrade is wet or frozen or the subbase material contains frozen material.

154-3.7 MAINTENANCE. No base or surface course shall be placed on the subbase until the subbase has been accepted by the RPR. The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, the Contractor shall verify that materials still meet all specification requirements before placement of additional material. Equipment may be routed over completed sections of subbase course, provided the equipment does not damage the

subbase course and the equipment is routed over the full width of the completed subbase course. Any damage to the subbase course from routing equipment over the subbase course shall be repaired by the Contractor at their expense.

154-3.8 SURFACE TOLERANCE. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches, reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. SMOOTHNESS. The finished surface shall not vary more than $\pm 1/2$ 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.

154-3.9 ACCEPTANCE SAMPLING AND TESTING. The aggregate base course shall be accepted for density and thickness on an area basis. Two test shall be made for density and thickness for each 1200 square yards. Sampling locations will be determined on a random basis per ASTM D3665.

a. DENSITY. The RPR or RPR's representative shall perform all density tests.

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D698. The in-place field density shall be determined per 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. If the specified density is not attained, the area represented by the failed test shall be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

When the material has greater than 30 percent retained on the $3/4$ inch sieve, use methods in ASTM D698 and the procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles.

b. THICKNESS. The thickness of the base course shall be within $+0$ and $-1/2$ inch of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than $1/2$ -inch, the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches, adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

METHOD OF MEASUREMENT

154-4.1 Subbase course shall be measured by the number of cubic yards of subbase course material placed and compacted to specified density and plan thickness requirements in the completed course. The quantity of subbase course material shall be measured in final position based upon

survey of the completed work computed from elevations to the nearest 0.01 foot. Subbase materials shall not be included in any other excavation quantities.

154-4.2 Separation geotextile shall be measured by the number of square yards of materials placed and accepted by the RPR as complying with the plans and specifications excluding seam overlaps and edge anchoring.

BASIS OF PAYMENT

154-5.1 Payment shall be made at the contract unit price per cubic yard for subbase course. This price shall be full compensation for furnishing all materials; for all preparation, hauling, and placing of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

154-5.2 Payment shall be made at the contract unit price per square yard for separation geotextile-class 2. The price shall be full compensation for furnishing all labor, equipment, material, anchors, and necessary incidentals.

Payment will be made under:

Item P-154-1	Subbase Course - per Cubic Yard
Item P-154-2	Separation Geotextile - per Square Yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 kN-m/m ³))
ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D4253	Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
ASTM D4759	Practice for Determining the Specification Conformance of Geosynthetics

ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
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ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
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American Association of State Highway and Transportation Officials (AASHTO)

M 288	Geotextile Specification for Highway Applications
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END OF ITEM P-154

ITEM P-209 CRUSHED AGGREGATE BASE COURSE

DESCRIPTION

209-1.1 This item consists of a base course composed of crushed aggregate base constructed on a prepared course in accordance with these specifications and in conformity to the dimensions and typical cross-sections shown on the plans.

MATERIALS

209-2.1 CRUSHED AGGREGATE BASE. Crushed aggregate shall consist of clean, sound, durable particles of crushed stone, crushed gravel, and shall be free from coatings of clay, silt, organic material, clay lumps or balls or other deleterious materials or coatings. The method used to produce the crushed gravel shall result in the fractured particles in the finished product as consistent and uniform as practicable. Fine aggregate portion, defined as the portion passing the No. 4 (4.75 mm) sieve shall consist of fines from the coarse aggregate crushing operation. The fine aggregate shall be produced by crushing stone, or gravel, that meet the coarse aggregate requirements for wear and soundness. Aggregate base material requirements are listed in the following table.

Crushed Aggregate Base Material Requirements

Material Test	Requirement	Standard
Coarse Aggregate		
Resistance to Degradation	Loss: 45% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Percentage of Fractured Particles	Minimum 90% by weight of particles with at least two fractured faces and 98% with at least one fractured face ¹	ASTM D5821
Flat Particles, Elongated Particles, or Flat and Elongated Particles	10% maximum, by weight, of flat, elongated, or flat and elongated particles ²	ASTM D4791
Fine Aggregate		
Liquid limit	Less than or equal to 25	ASTM D4318
Plasticity Index	Not more than five (5)	ASTM D4318

¹ The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

² A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

209-2.2 GRADATION REQUIREMENTS. The gradation of the aggregate base material shall meet the requirements of the gradation given in the following table when tested per ASTM C117 and ASTM C136. The gradation shall be well graded from coarse to fine and shall not vary from the lower limit on one sieve to the high limit on an adjacent sieve or vice versa.

Gradation of Aggregate Base

Sieve Size	Design Range Percentage by Weight passing	Contractor's Final Gradation	Job Control Grading Band Tolerances ¹ (Percent)
2 inch (50 mm)	100		0
1-1/2 inch (37.5 mm)	95-100		±5
1 inch (25.0 mm)	70-95		±8
3/4 inch (19.0 mm)	55-85		±8
No. 4 (4.75 mm)	30-60		±8
No. 40 ² (425 µm)	10-30		±5
No. 200 ² (75 µm)	0-5		±3

¹ The "Job Control Grading Band Tolerances for Contractor's Final Gradation" in the table shall be applied to "Contractor's Final Gradation" to establish a job control grading band. The full tolerance still applies if application of the tolerances results in a job control grading band outside the design range.

² The fraction of material passing the No 200 (75 µm) sieve shall not exceed two-thirds the fraction passing the No 40 (425 µm) sieve.

209-2.3 SAMPLING AND TESTING.

a. AGGREGATE BASE MATERIALS. The Contractor shall take samples of the aggregate base in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraph 209-2.1. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

b. GRADATION REQUIREMENTS. The Contractor shall take at least two aggregate base samples per day in the presence of the Resident Project Representative (RPR) to check the final gradation. Sampling shall be per ASTM D75. Material shall meet the requirements in paragraph 209-2.2. The samples shall be taken from the in-place, un-compacted material at sampling points and intervals designated by the RPR.

209-2.4 SEPARATION GEOTEXTILE. Not used.

CONSTRUCTION METHODS

209-3.1 CONTROL STRIP. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved by the RPR.

209-3.2 PREPARING UNDERLYING SUBGRADE AND/OR SUBBASE. The underlying subgrade and/or subbase shall be checked and accepted by the RPR before base course placing and spreading operations begin. Re-proof rolling of the subgrade or proof rolling of the subbase in accordance with Item P-152, at the Contractor's expense, may be required by the RPR if the Contractor fails to ensure proper drainage or protect the subgrade and/or subbase. Any ruts or soft, yielding areas due to improper drainage conditions, hauling, or any other cause, shall be corrected before the base course is placed. To ensure proper drainage, the spreading of the base shall begin along the centerline of the pavement on a crowned section or on the high side of the pavement with a one-way slope.

209-3.3 PRODUCTION. The aggregate shall be uniformly blended and, when at a satisfactory moisture content per paragraph 209-3.5, the approved material may be transported directly to the placement.

209-3.4 PLACEMENT. The aggregate shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

The aggregate shall meet gradation and moisture requirements prior to compaction. The base course shall be constructed in lifts as established in the control strip, but not less than 4 inches nor more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications at the Contractor's expense.

209-3.5 COMPACTION. Immediately after completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers shall be sufficient to compact the material to the required density within the same day that the aggregate is placed on the subgrade.

The field density of each compacted lift of material shall be at least 100% of the maximum density of laboratory specimens prepared from samples of the base material delivered to the jobsite. The laboratory specimens shall be compacted and tested in accordance with ASTM D698. The moisture content of the material during placing operations shall be within ± 2 percentage points of the optimum moisture content as determined by ASTM D698. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

209-3.6 WEATHER LIMITATIONS. Material shall not be placed unless the ambient air temperature is at least 40°F and rising. Work on base course shall not be conducted when the subgrade or subbase is wet or frozen or the base material contains frozen material.

209-3.7 MAINTENANCE. The base course shall be maintained in a condition that will meet all specification requirements. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. Equipment may be routed over completed sections of base course, provided that no damage results and the equipment is routed over the full width of the completed base course. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at the Contractor's expense.

209-3.8 SURFACE TOLERANCES. After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches, reshaped and recompacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

a. SMOOTHNESS. The finished surface shall not vary more than 3/8-inch when tested with a 12-foot straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot straightedge for the full length of each line on a 50-foot grid.

b. GRADE. The grade and crown shall be measured on a 50-foot grid and shall be within +0 and -1/2 inch of the specified grade.

209-3.9 ACCEPTANCE SAMPLING AND TESTING. Crushed aggregate base course shall be accepted for density and thickness on an area basis. Two tests shall be made for density and thickness for each 1200 square yds. Sampling locations will be determined on a random basis per ASTM D3665.

a. DENSITY. The RPR or RPR's representative shall perform all density tests.

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D698. The in-place field density shall be determined per 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. If the specified density is not attained, the area represented by the failed test must be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. THICKNESS. Depth tests shall be made by test holes at least 3 inches in diameter that extend through the base. The thickness of the base course shall be within +0 and -1/2 inch of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch, the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches, adding new material of proper gradation, and the material shall be blended and recompact to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

METHOD OF MEASUREMENT

209-4.1 The quantity of crushed aggregate base course will be determined by measurement of the number of cubic yards of material actually constructed and accepted by the RPR as complying with the plans and specifications. Base materials shall not be included in any other excavation quantities.

BASIS OF PAYMENT

209-5.1 Payment shall be made at the contract unit price per cubic yard for crushed aggregate base course. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-209-1	Crushed Aggregate Base Course - per cubic yard
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³))

ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2700 kN-m/m ³))
ASTM D2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4491	Standard Test Methods for Water Permeability of Geotextiles by Permittivity
ASTM D4643	Standard Test Method for Determination of Water Content of Soil and Rock by Microwave Oven Heating
ASTM D4751	Standard Test Methods for Determining Apparent Opening Size of a Geotextile
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
ASTM D7928	Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis

American Association of State Highway and Transportation Officials (AASHTO)

M288	Standard Specification for Geosynthetic Specification for Highway Applications
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END OF ITEM P-209

Item P-401 ASPHALT MIX PAVEMENT**DESCRIPTION**

401-1.1 This item shall consist of pavement courses composed of mineral aggregate and asphalt binder mixed in a central mixing plant and placed on a prepared base or stabilized course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

MATERIALS

401-2.1 AGGREGATE. Aggregates shall consist of crushed stone, crushed gravel, crushed slag, screenings, natural sand, and mineral filler, as required. The aggregates should have no known history of detrimental pavement staining due to ferrous sulfides, such as pyrite. Coarse aggregate is the material retained on the No. 4 (4.75 mm) sieve. Fine aggregate is the material passing the No. 4 (4.75 mm) sieve.

a. COARSE AGGREGATE. Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. Coarse aggregate material requirements are given in the table below.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Clay lumps and friable particles	1.0 % maximum	ASTM C142
Percentage of Fractured Particles	For pavements designed for aircraft gross weights of 60,000 pounds or more: Minimum 75% by weight of particles with at least two fractured faces and 85% with at least one fractured face ¹	ASTM D5821
	For pavements designed for aircraft gross weights less than 60,000 pounds: Minimum 50% by weight of particles with at least two fractured faces and 65% with at least one fractured face ¹	
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 ²	ASTM D4791
Bulk density of slag ³	Weigh not less than 70 pounds per cubic foot	ASTM C29.

¹ The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

² A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

³ Only required if slag is specified.

b. FINE AGGREGATE. Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, slag, or gravel and shall be free from coatings of clay, silt, or other objectionable matter. Natural (non-manufactured) sand may be used to obtain the gradation of the fine aggregate blend or to improve the workability of the mix. Fine aggregate material requirements are listed in the table below.

Fine Aggregate Material Requirements

Material Test	Requirement	Standard
Liquid limit	25 maximum	ASTM D4318
Plasticity Index	4 maximum	ASTM D4318
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Clay lumps and friable particles	1.0% maximum	ASTM C142
Sand equivalent	45 minimum	ASTM D2419

c. SAMPLING. ASTM D75 shall be used in sampling coarse and fine aggregate.

401-2.2 MINERAL FILLER. Mineral filler (baghouse fines) may be added in addition to material naturally present in the aggregate. Mineral filler shall meet the requirements of ASTM D242.

Mineral Filler Requirements

Material Test	Requirement	Standard
Plasticity Index	4 maximum	ASTM D4318

401-2.3 ASPHALT BINDER. Asphalt binder shall conform to ASTM D6373 Performance Grade (PG) 70-28.

Asphalt Binder PG Plus Test Requirements

Material Test	Requirement	Standard
Elastic Recovery	75% minimum	ASTM D6084 ¹

¹ Follow procedure B on RTFO aged binder.

401-2.4 ANTI-STRIPPING AGENT. Any anti-stripping agent or additive (anti-strip) shall be heat stable and shall not change the asphalt binder grade beyond specifications. Anti-strip shall be an approved material of the Department of Transportation of the State in which the project is located.

COMPOSITION

401-3.1 COMPOSITION OF MIXTURE(S). The asphalt mix shall be composed of a mixture of aggregates, filler and anti-strip agent if required, and asphalt binder. The aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

401-3.2 JOB MIX FORMULA (JMF) LABORATORY. The laboratory used to develop the JMF shall possess a current certificate of accreditation, listing D3666 from a national accrediting authority and all test methods required for developing the JMF; and be listed on the accrediting authority's website. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Resident Project Representative (RPR) prior to start of construction.

401-3.3 JOB MIX FORMULA (JMF). No asphalt mixture shall be placed until an acceptable mix design has been submitted to the RPR for review and accepted in writing. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

When the project requires asphalt mixtures of differing aggregate gradations and/or binders, a separate JMF shall be submitted for each mix. Add anti-stripping agent to meet tensile strength requirements.

The JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 401-3.2. The asphalt mixture shall be designed using procedures contained in Asphalt Institute MS-2 Mix Design Manual, 7th Edition. Samples shall be prepared and compacted using a Marshall compactor in accordance with ASTM D6926.

Should a change in sources of materials be made, a new JMF must be submitted to the RPR for review and accepted in writing before the new material is used. After the initial production JMF has been approved by the RPR and a new or modified JMF is required for whatever reason, the subsequent cost of the new or modified JMF, including a new control strip when required by the RPR, will be borne by the Contractor.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

The JMF shall be submitted in writing by the Contractor at least 30 days prior to the start of paving operations. The JMF shall be developed within the same construction season using aggregates proposed for project use.

The JMF shall be dated, and stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items as a minimum:

- Manufacturer's Certificate of Analysis (COA) for the asphalt binder used in the JMF in accordance with paragraph 401-2.3. Certificate of asphalt performance grade is with modifier already added, if used and must indicate compliance with ASTM D6373. For plant modified asphalt binder, certified test report indicating grade certification of modified asphalt binder.
- Manufacturer's Certificate of Analysis (COA) for the anti-stripping agent if used in the JMF in accordance with paragraph 401-2.4.
- Certified material test reports for the course and fine aggregate and mineral filler in accordance with paragraphs 401-2.1.
- Percent passing each sieve size for individual gradation of each aggregate cold feed and/or hot bin; percent by weight of each cold feed and/or hot bin used; and the total combined gradation in the JMF.
- Specific Gravity and absorption of each coarse and fine aggregate.
- Percent natural sand.
- Percent fractured faces.
- Percent by weight of flat particles, elongated particles, and flat and elongated particles (and criteria).
- Percent of asphalt.

- Number of blows or gyrations
- Laboratory mixing and compaction temperatures.
- Supplier-recommended field mixing and compaction temperatures.
- Plot of the combined gradation on a 0.45 power gradation curve.
- Graphical plots of air voids, voids in the mineral aggregate (VMA), and unit weight versus asphalt content. To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.
- Tensile Strength Ratio (TSR).
- Type and amount of Anti-strip agent when used.
- Asphalt Pavement Analyzer (APA) results.
- Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted.

Table 1. Asphalt Design Criteria

Test Property	Value	Test Method
Number of blows or gyrations	50	
Air voids (%)	3.5	ASTM D3203
Percent voids in mineral aggregate (VMA), minimum	See Table 2	ASTM D6995
Tensile Strength Ratio (TSR) ¹	not less than 80 at a saturation of 70-80%	ASTM D4867
Asphalt Pavement Analyzer (APA) ^{2,3}	Less than 10 mm @ 4000 passes	AASHTO T340 at 250 psi hose pressure at 64°C test temperature

¹ Test specimens for TSR shall be compacted at 7 ± 1.0 % air voids. In areas subject to freeze-thaw, use freeze-thaw conditioning in lieu of moisture conditioning per ASTM D4867.

² AASHTO T340 at 100 psi hose pressure at 64°C test temperature may be used in the interim. If this method is used the required Value shall be less than 5 mm @ 8000 passes

³ Where APA not available, use Hamburg Wheel test (AASHTO T-324) 10mm @ 20,000 passes at 50°C.

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 2 when tested in accordance with ASTM C136 and ASTM C117.

The gradations in Table 2 represent the limits that shall determine the suitability of aggregate for use from the sources of supply; be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa.

Table 2. Aggregate - Asphalt Pavements

Sieve Size	Percentage by Weight Passing Sieve
1 inch (25.0 mm)	*
3/4 inch (19.0 mm)	100
1/2 inch (12.5 mm)	90-100
3/8 inch (9.5 mm)	72-88
No. 4 (4.75 mm)	53-73
No. 8 (2.36 mm)	38-60
No. 16 (1.18 mm)	26-48
No. 30 (600 µm)	18-38
No. 50 (300 µm)	11-27
No. 100 (150 µm)	6-18
No. 200 (75 µm)	3-6
Minimum Voids in Mineral Aggregate (VMA)¹	15.0
Asphalt Percent:	
Stone or gravel	5.0-7.5
Slag	6.5-9.5
Recommended Minimum Construction Lift Thickness	2 inch

¹To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.

The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

401-3.4 RECLAIMED ASPHALT PAVEMENT (RAP). RAP shall not be used.

401-3.5 CONTROL STRIP. Full production shall not begin until an acceptable control strip has been constructed and accepted in writing by the RPR. The Contractor shall prepare and place a quantity of asphalt according to the JMF. The underlying grade or pavement structure upon which the control strip is to be constructed shall be the same as the remainder of the course represented by the control strip.

The Contractor will not be allowed to place the control strip until the Contractor quality control program (CQCP), showing conformance with the requirements of paragraph 401-5.1, has been accepted, in writing, by the RPR.

The control strip will consist of at least 250 tons or 1/2 subplot, whichever is greater. The control strip shall be placed in two lanes of the same width and depth to be used in production with a longitudinal cold joint. The cold joint must be cut back in accordance with paragraph 401-4.14 using the same

procedure that will be used during production. The cold joint for the control strip will be an exposed construction joint at least four (4) hours old or when the mat has cooled to less than 160°F. The equipment used in construction of the control strip shall be the same type, configuration and weight to be used on the project.

The control strip will be considered acceptable by the RPR if the gradation, asphalt content, and VMA are within the action limits specified in paragraph 401-5.5a; and Mat density greater than or equal to 94.5%, air voids 3.5% +/- 1%, and joint density greater than or equal to 92.5%.

If the control strip is unacceptable, necessary adjustments to the JMF, plant operation, placing procedures, and/or rolling procedures shall be made and another control strip shall be placed. Unacceptable control strips shall be removed at the Contractor's expense.

The control strip will be considered one lot for payment based upon the average of a minimum of 3 samples (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 401-8.1 using a lot pay factor equal to 100.

CONSTRUCTION METHODS

401-4.1 WEATHER LIMITATIONS. The asphalt shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 4. The temperature requirements may be waived by the RPR, if requested; however, all other requirements including compaction shall be met.

Table 4. Surface Temperature Limitations of Underlying Course

Mat Thickness	Base Temperature (Minimum)	
	°F	°C
3 inches or greater	40 ¹	4
Greater than 2 inches but less than 3 inches	45	7

401-4.2 ASPHALT PLANT. Plants used for the preparation of asphalt shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 including the following items.

a. INSPECTION OF PLANT. The RPR, or RPR's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant: verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.

b. STORAGE BINS AND SURGE BINS. The asphalt mixture stored in storage and/or surge bins shall meet the same requirements as asphalt mixture loaded directly into trucks. Asphalt mixture shall not be stored in storage and/or surge bins for a period greater than twelve (12) hours. If the RPR determines there is an excessive heat loss, segregation, or oxidation of the asphalt mixture due to temporary storage, temporary storage shall not be allowed.

401-4.3 AGGREGATE STOCKPILE MANAGEMENT. Aggregate stockpiles shall be constructed in a manner that prevents segregation and intermixing of deleterious materials. Aggregates from

different sources shall be stockpiled, weighed and batched separately at the asphalt batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used.

A continuous supply of materials shall be provided to the work to ensure continuous placement.

401-4.4 HAULING EQUIPMENT. Trucks used for hauling asphalt shall have tight, clean, and smooth metal beds. To prevent the asphalt from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the RPR. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

401-4.4.1 MATERIAL TRANSFER VEHICLE (MTV). Material transfer vehicles are not required.

401-4.5 ASPHALT PAVERS. Asphalt pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of asphalt that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface. The asphalt paver shall be equipped with a control system capable of automatically maintaining the specified screed grade and elevation.

If the spreading and finishing equipment in use leaves tracks or indented areas, or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued.

The paver shall be capable of paving to a minimum width specified in paragraph 401-4.12.

401-4.6 ROLLERS. The number, type, and weight of rollers shall be sufficient to compact the asphalt to the required density while it is still in a workable condition without crushing of the aggregate, depressions or other damage to the pavement surface. Rollers shall be in good condition, clean, and capable of operating at slow speeds to avoid displacement of the asphalt. All rollers shall be specifically designed and suitable for compacting asphalt concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used.

401-4.7 DENSITY DEVICE. The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production paving. The Contractor shall supply a qualified technician during all paving operations to calibrate the gauge and obtain accurate density readings for all new asphalt. These densities shall be supplied to the RPR upon request at any time during construction. No separate payment will be made for supplying the density gauge and technician.

401-4.8 PREPARATION OF ASPHALT BINDER. The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the asphalt binder to the mixer at a uniform temperature. The temperature of unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F when added to the aggregate. The temperature of modified asphalt binder shall be no more than 350°F when added to the aggregate.

401-4.9 PREPARATION OF MINERAL AGGREGATE. The aggregate for the asphalt shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to

the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F when the asphalt binder is added. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

401-4.10 PREPARATION OF ASPHALT MIXTURE. The aggregates and the asphalt binder shall be weighed or metered and mixed in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of all asphalt upon discharge shall not exceed 0.5%.

401-4.11 APPLICATION OF PRIME AND TACK COAT. Immediately before placing the asphalt mixture, the underlying course shall be cleaned of all dust and debris.

A tack coat shall be applied in accordance with Item P-603 to all vertical and horizontal asphalt and concrete surfaces prior to placement of the first and each subsequent lift of asphalt mixture.

401-4.12 LAYDOWN PLAN, TRANSPORTING, PLACING, AND FINISHING. Prior to the placement of the asphalt, the Contractor shall prepare a laydown plan with the sequence of paving lanes and width to minimize the number of cold joints; the location of any temporary ramps; laydown temperature; and estimated time of completion for each portion of the work (milling, paving, rolling, cooling, etc.). The laydown plan and any modifications shall be approved by the RPR.

Deliveries shall be scheduled so that placing and compacting of asphalt is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to approximately ambient temperature. The Contractor, at their expense, shall be responsible for repair of any damage to the pavement caused by hauling operations.

Contractor shall survey each lift of asphalt surface course and certify to RPR that every lot of each lift meets the grade tolerances of paragraph 401-6.2d before the next lift can be placed.

Edges of existing asphalt pavement abutting the new work shall be saw cut and the cut off material and laitance removed. Apply a tack coat in accordance with P-603 before new asphalt material is placed against it.

The speed of the paver shall be regulated to eliminate pulling and tearing of the asphalt mat. Placement of the asphalt mix shall begin along the centerline of a crowned section or on the high side of areas with a one way slope unless shown otherwise on the laydown plan as accepted by the RPR. The asphalt mix shall be placed in consecutive adjacent lanes having a minimum width of 12.5 feet except where edge lanes require less width to complete the area. Additional screed sections attached to widen the paver to meet the minimum lane width requirements must include additional auger sections to move the asphalt mixture uniformly along the screed extension. Echelon paving or use of infrared heating devices is recommended to maintain hot longitudinal joints.

The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least one foot; however, the joint in the surface top course shall be at the centerline of crowned pavements. Transverse joints in one course shall be offset by at least 10 feet from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet. On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the asphalt may be spread and luted by hand tools.

The RPR may at any time, reject any batch of asphalt, on the truck or placed in the mat, which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or overheated asphalt mixture. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

Areas of segregation in the surface course, as determined by the RPR, shall be removed and replaced at the Contractor's expense. The area shall be removed by saw cutting and milling a minimum of the construction lift thickness as specified in paragraph 401-3.3, Table 2 for the approved mix design. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet long.

401-4.13 COMPACTION OF ASPHALT MIXTURE. After placing, the asphalt mixture shall be thoroughly and uniformly compacted by self-propelled rollers. The surface shall be compacted as soon as possible when the asphalt has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any surface defects and/or displacement occurring as a result of the roller, or from any other cause, shall be corrected at the Contractor's expense.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the asphalt to the roller, the wheels shall be equipped with a scraper and kept moistened with water as necessary.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power tampers.

Any asphalt that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

401-4.14 JOINTS. The formation of all joints shall be made to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

The roller shall not pass over the unprotected end of the freshly laid asphalt except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods,

all contact surfaces shall be coated with an asphalt tack coat before placing any fresh asphalt against the joint.

Longitudinal joints which have been left exposed for more than four (4) hours; the surface temperature has cooled to less than 175°F; or are irregular, damaged, uncompacted or otherwise defective shall be cut back with a cutting wheel or pavement saw a maximum of 3 inches to expose a clean, sound, uniform vertical surface for the full depth of the course. All cutback material and any laitance produced from cutting joints shall be removed from the project. Asphalt tack coat in accordance with P-603 shall be applied to the clean, dry joint prior to placing any additional fresh asphalt against the joint. The cost of this work shall be considered incidental to the cost of the asphalt. Cut back of all cold joints is required as specified above.

401-4.15 SAW-CUT GROOVING. Saw-cut grooving is not required.

401-4.16 DIAMOND GRINDING. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive.

Diamond grinding shall be performed with a machine designed specifically for diamond grinding capable of cutting a path at least 3 feet wide. The saw blades shall be 1/8-inch wide with a sufficient number of blades to create grooves between 0.090 and 0.130 inches wide; and peaks and ridges approximately 1/32 inch higher than the bottom of the grinding cut. The actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Equipment or grinding procedures that cause ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces. Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. The Contractor shall apply a surface treatment per P-608 to all areas that have been subject to grinding.

401-4.17 NIGHTTIME PAVING REQUIREMENTS. The Contractor shall provide adequate lighting during any nighttime construction. A lighting plan shall be submitted by the Contractor and approved by the RPR prior to the start of any nighttime work. All work shall be in accordance with the approved CSPP and lighting plan.

CONTRACTOR QUALITY CONTROL (CQC)

401-5.1 GENERAL. The Contractor shall develop a Contractor Quality Control Program (CQCP) in accordance with Item C-100. No partial payment will be made for materials without an approved CQCP.

401-5.2 CONTRACTOR QUALITY CONTROL (QC) FACILITIES. The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

401-5.3 CONTRACTOR QC TESTING. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to these specifications and as set forth in the

approved CQCP. The testing program shall include, but not necessarily be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, field compaction, and surface smoothness. A QC Testing Plan shall be developed as part of the CQCP.

a. ASPHALT CONTENT. A minimum of two tests shall be performed per day in accordance with ASTM D6307 or ASTM D2172 for determination of asphalt content. When using ASTM D6307, the correction factor shall be determined as part of the first test performed at the beginning of plant production; and as part of every tenth test performed thereafter. The asphalt content for the day will be determined by averaging the test results.

b. GRADATION. Aggregate gradations shall be determined a minimum of twice per day from mechanical analysis of extracted aggregate in accordance with ASTM D5444, ASTM C136, and ASTM C117.

c. MOISTURE CONTENT OF AGGREGATE. The moisture content of aggregate used for production shall be determined a minimum of once per day in accordance with ASTM C566.

d. MOISTURE CONTENT OF ASPHALT. The moisture content shall be determined once per day in accordance with AASHTO T329 or ASTM D1461.

e. TEMPERATURES. Temperatures shall be checked, at least four times per day, at necessary locations to determine the temperatures of the dryer, the asphalt binder in the storage tank, the asphalt at the plant, and the asphalt at the job site.

f. IN-PLACE DENSITY MONITORING. The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density in accordance with ASTM D2950.

g. SMOOTHNESS FOR CONTRACTOR QUALITY CONTROL.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot “straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using either the FAA profile program, ProFAA, or FHWA ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) TRANSVERSE MEASUREMENTS. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement

centerline each 50 feet or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) LONGITUDINAL MEASUREMENTS. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet; and at the third points of paving lanes when widths of paving lanes are 20 ft or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 401-6.1d(3). Areas that have been ground shall be sealed with a surface treatment in accordance with Item P-608. To avoid the surface treatment creating any conflict with runway or taxiway markings, it may be necessary to seal a larger area.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. GRADE. Grade shall be evaluated daily to allow adjustments to paving operations when grade measurements do not meet specifications. As a minimum, grade shall be evaluated prior to and after the placement of the first lift and after placement of the surface lift.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically and 0.1 feet laterally. The documentation will be provided by the Contractor to the RPR by the end of the following working day.

Areas with humps or depressions that exceed grade or smoothness criteria and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch less than the thickness specified on the plans. Grinding shall be in accordance with paragraph 401-4.16.

The Contractor shall repair low areas or areas that cannot be corrected by grinding by removal of deficient areas to the depth of the final course plus 1/2 inch and replacing with new material. Skin patching is not allowed.

401-5.4 SAMPLING. When directed by the RPR, the Contractor shall sample and test any material that appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

401-5.5 CONTROL CHARTS. The Contractor shall maintain linear control charts for both individual measurements and range (i.e. difference between highest and lowest measurements) for aggregate gradation, asphalt content, and VMA. The VMA for each day will be calculated and monitored by the QC laboratory.

Control charts shall be posted in a location satisfactory to the RPR and kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a problem and the Contractor is not taking satisfactory corrective action, the RPR may suspend production or acceptance of the material.

a. INDIVIDUAL MEASUREMENTS. Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation, asphalt content, and VMA. The control charts shall use the job mix formula target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

Control Chart Limits for Individual Measurements

Sieve	Action Limit	Suspension Limit
3/4 inch (19.0 mm)	±6%	±9%
1/2 inch (12.5 mm)	±6%	±9%
3/8 inch (9.5 mm)	±6%	±9%
No. 4 (4.75 mm)	±6%	±9%
No. 16 (1.18 mm)	±5%	±7.5%
No. 50 (300 µm)	±3%	±4.5%
No. 200 (75 µm)	±2%	±3%
Asphalt Content	±0.45%	±0.70%
Minimum VMA	-0.5%	-1.0%

b. RANGE. Control charts shall be established to control gradation process variability. The range shall be plotted as the difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of $n = 2$. Should the Contractor elect to perform more than two tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for $n = 3$ and by 1.27 for $n = 4$.

Control Chart Limits Based on Range

Sieve	Suspension Limit
1/2 inch (12.5 mm)	11%
3/8 inch (9.5 mm)	11%
No. 4 (4.75 mm)	11%
No. 16 (1.18 mm)	9%
No. 50 (300 µm)	6%
No. 200 (75 µm)	3.5%
Asphalt Content	0.8%

c. CORRECTIVE ACTION. The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

(1) One point falls outside the Suspension Limit line for individual measurements or range;
or

(2) Two points in a row fall outside the Action Limit line for individual measurements.

401-5.6 QC REPORTS. The Contractor shall maintain records and shall submit reports of QC activities daily, in accordance with Item C-100 .

MATERIAL ACCEPTANCE

401-6.1 ACCEPTANCE SAMPLING AND TESTING. Unless otherwise specified, all acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the RPR at no cost to the Contractor except that coring as required in this section shall be completed and paid for by the Contractor.

a. QUALITY ASSURANCE (QA) TESTING LABORATORY. The QA testing laboratory performing these acceptance tests will be accredited in accordance with ASTM D3666. The QA laboratory accreditation will be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing will be listed on the lab accreditation.

b. LOT SIZE. A standard lot will be equal to one day's production divided into approximately equal sublots of between 400 to 600 tons. When only one or two sublots are produced in a day's production, the sublots will be combined with the production lot from the previous or next day.

Where more than one plant is simultaneously producing asphalt for the job, the lot sizes will apply separately for each plant.

c. ASPHALT AIR VOIDS. Plant-produced asphalt will be tested for air voids on a subplot basis.

(1) SAMPLING. Material from each subplot shall be sampled in accordance with ASTM D3665. Samples shall be taken from material deposited into trucks at the plant or at the job site in accordance with ASTM D979. The sample of asphalt may be put in a covered metal tin and placed in an oven for not less than 30 minutes nor more than 60 minutes to maintain the material at or above the compaction temperature as specified in the JMF.

(2) TESTING. Air voids will be determined for each subplot in accordance with ASTM D3203 for a set of three compacted specimens prepared in accordance with ASTM D6926 or ASTM D6925.

d. IN-PLACE ASPHALT MAT AND JOINT DENSITY. Each subplot will be tested for in-place mat and joint density as a percentage of the theoretical maximum density (TMD).

(1) SAMPLING. The Contractor will cut minimum 5 inch diameter samples in accordance with ASTM D5361. The Contractor shall furnish all tools, labor, and materials for cleaning, and filling the cored pavement. Laitance produced by the coring operation shall be removed immediately after coring, and core holes shall be filled within one day after sampling in a manner acceptable to the RPR.

(2) BOND. Each lift of asphalt shall be bonded to the underlying layer. If cores reveal that the surface is not bonded, additional cores shall be taken as directed by the RPR to determine the

extent of unbonded areas. Unbonded areas shall be removed by milling and replaced at no additional cost as directed by the RPR.

(3) THICKNESS. Thickness of each lift of surface course will be evaluated by the RPR for compliance to the requirements shown on the plans after any necessary corrections for grade. Measurements of thickness will be made using the cores extracted for each subplot for density measurement. The maximum allowable deficiency at any point will not be more than 1/4 inch less than the thickness indicated for the lift. Average thickness of lift, or combined lifts, will not be less than the indicated thickness. Where the thickness tolerances are not met, the lot or subplot shall be corrected by the Contractor at his expense by removing the deficient area and replacing with new pavement. The Contractor, at his expense, may take additional cores as approved by the RPR to circumscribe the deficient area.

(4) MAT DENSITY. One core shall be taken from each subplot. Core locations will be determined by the RPR in accordance with ASTM D3665. Cores for mat density shall not be taken closer than one foot from a transverse or longitudinal joint. The bulk specific gravity of each cored sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each subplot sample by the TMD for that subplot.

(5) JOINT DENSITY. One core centered over the longitudinal joint shall be taken for each subplot that has a longitudinal joint. Core locations will be determined by the RPR in accordance with ASTM D3665. The bulk specific gravity of each core sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each joint density sample by the average TMD for the lot. The TMD used to determine the joint density at joints formed between lots will be the lower of the average TMD values from the adjacent lots.

401-6.2 ACCEPTANCE CRITERIA.

a. GENERAL. Acceptance will be based on the implementation of the Contractor Quality Control Program (CQCP) and the following characteristics of the asphalt and completed pavements: air voids, mat density, joint density, grade, and Profilograph roughness.

b. AIR VOIDS AND MAT DENSITY. Acceptance of each lot of plant produced material for mat density and air voids will be based on the percentage of material within specification limits (PWL). If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment will be determined in accordance with paragraph 401-8.1.

c. JOINT DENSITY. Acceptance of each lot of plant produced asphalt for joint density will be based on the PWL. If the PWL of the lot is equal to or exceeds 90%, the lot will be considered acceptable. If the PWL is less than 90%, the Contractor shall evaluate the reason and act accordingly. If the PWL is less than 80%, the Contractor shall cease operations and until the reason for poor compaction has been determined. If the PWL is less than 71%, the pay factor for the lot used to complete the joint will be reduced by five (5) percentage points. This lot pay factor reduction will be incorporated and evaluated in accordance with paragraph 401-8.1.

d. GRADE. The final finished surface of the pavement shall be surveyed to verify that the grade elevations and cross-sections shown on the plans do not deviate more than 1/2 inch vertically or 0.1 feet laterally.

Cross-sections of the pavement shall be taken at a minimum 50-foot longitudinal spacing, at all longitudinal grade breaks, and at start and end of each lane placed. Minimum cross-section grade

points shall include grade at centerline, ± 10 feet of centerline, and edge of runway and taxiway pavement.

The survey and documentation shall be stamped and signed by a licensed surveyor. Payment for sublots that do not meet grade for over 25% of the subplot shall not be more than 95%.

e. PROFILOGRAPH ROUGHNESS FOR QA ACCEPTANCE. The final profilograph shall be the full length of the project to facilitate testing of roughness between lots. The Contractor, in the presence of the RPR shall perform a profilograph roughness test on the completed project with a profilograph meeting the requirements of ASTM E1274 or a Class I inertial profiler meeting ASTM E950. Data and results shall be provided within 48 hrs of profilograph roughness tests.

The pavement shall have a average profile index less than 15 inches per mile per 1/10 mile. The equipment shall utilize electronic recording and automatic computerized reduction of data to indicate "must grind" bumps and the Profile Index for the pavement using a 0.2-inch blanking band. The bump template must span one inch with an offset of 0.4 inches. The profilograph must be calibrated prior to use and operated by a factory or State DOT approved, trained operator. Profilograms shall be recorded on a longitudinal scale of one inch equals 25 feet and a vertical scale of one inch equals one inch. Profilograph shall be performed one foot right and left of project centerline and 15 feet right and left of project centerline. Any areas that indicate "must grind" shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing full depth of surface course, as directed by the RPR. Where corrections are necessary, a second profilograph run shall be performed to verify that the corrections produced an average profile index of 15 inches per mile per 1/10 mile or less.

401-6.3 PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS (PWL). The PWL will be determined in accordance with procedures specified in Item C-110. The specification tolerance limits (L) for lower and (U) for upper are contained in Table 5.

Table 5. Acceptance Limits for Air Voids and Density

Test Property	Pavements Specification Tolerance Limits	
	L	U
Air Voids Total Mix (%)	2.0	5.0
Surface Course Mat Density (%)	92.8	-
Base Course Mat Density (%)	92.0	-
Joint density (%)	90.5	--

a. OUTLIERS. All individual tests for mat density and air voids will be checked for outliers (test criterion) in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded, and the PWL will be determined using the remaining test values. The criteria in Table 5 is based on production processes which have a variability with the following standard deviations: Surface Course Mat Density (%), 1.30; Base Course Mat Density (%), 1.55; Joint Density (%), 1.55.

The Contractor should note that (1) 90 PWL is achieved when consistently producing a surface course with an average mat density of at least 94.5% with 1.30% or less variability, (2) 90 PWL is achieved when consistently producing a base course with an average mat density of at least 94.0%

with 1.55% or less variability, and (3) 90 PWL is achieved when consistently producing joints with an average joint density of at least 92.5% with 1.55% or less variability.

401-6.4 RESAMPLING PAVEMENT FOR MAT DENSITY.

a. GENERAL. Resampling of a lot of pavement will only be allowed for mat density, and then, only if the Contractor requests same, in writing, within 48 hours after receiving the written test results from the RPR. A retest will consist of all the sampling and testing procedures contained in paragraphs 401-6.1d and 401-6.2b. Only one resampling per lot will be permitted.

(1) A redefined PWL will be calculated for the resampled lot. The number of tests used to calculate the redefined PWL will include the initial tests made for that lot plus the retests.

(2) The cost for resampling and retesting shall be borne by the Contractor.

b. PAYMENT FOR RESAMPLED LOTS. The redefined PWL for a resampled lot will be used to calculate the payment for that lot in accordance with Table 6.

c. OUTLIERS. Check for outliers in accordance with ASTM E178, at a significance level of 5%.

METHOD OF MEASUREMENT

401-7.1 MEASUREMENT. Asphalt shall be measured by the number of tons of asphalt used in the accepted work. Batch weights or truck scale weights will be used to determine the basis for the tonnage.

BASIS OF PAYMENT

401-8.1 PAYMENT. Payment for a lot of asphalt meeting all acceptance criteria as specified in paragraph 401-6.2 shall be made based on results of tests for mat density and air voids. Payment for acceptable lots shall be adjusted according to paragraph 401-8.1c for mat density and air voids; and paragraph 401-6.2c for joint density, subject to the limitation that:

a. The total project payment for plant mix asphalt pavement shall not exceed 100 percent of the product of the contract unit price and the total number of tons of asphalt used in the accepted work.

b. The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

c. BASIS OF ADJUSTED PAYMENT. The pay factor for each individual lot shall be calculated in accordance with Table 6. A pay factor shall be calculated for both mat density and air voids. The lot pay factor shall be the higher of the two values when calculations for both mat density and air voids are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either mat density or air voids is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both mat density and air voids are less than 100%. If PWL for joint density is less than 71% then the lot pay factor shall be reduced by 5% but be no higher than 95%.

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 401-8.1a. Payment in excess of 100% for accepted lots of asphalt

shall be used to offset payment for accepted lots of asphalt pavement that achieve a lot pay factor less than 100%.

Payment for sublots which do not meet grade in accordance with paragraph 401-6.2d after correction for over 25% of the subplot shall be reduced by 5%.

Table 6. Price adjustment schedule¹

Percentage of material within specification limits (PWL)	Lot pay factor (percent of contract unit price)
96 – 100	106
90 – 95	PWL + 10
75 – 89	0.5 PWL + 55
55 – 74	1.4 PWL – 12
Below 55	Reject ²

¹ Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment above 100% shall be subject to the total project payment limitation specified in paragraph 401-8.1a.

² The lot shall be removed and replaced. However, the RPR may decide to allow the rejected lot to remain. In that case, if the RPR and Contractor agree in writing that the lot shall not be removed, it shall be paid for at 50% of the contract unit price and the total project payment shall be reduced by the amount withheld for the rejected lot.

d. PROFILOGRAPH ROUGHNESS. The Contractor will receive full payment when the profilograph average profile index is in accordance with paragraph 401-6.2e. When the final average profile index for the entire length of pavement does not exceed 15 inches per mile per 1/10 mile, payment will be made at the contract unit price for the completed pavement.

401-8.1 PAYMENT.

Payment will be made under:

Item P-401-1 Asphalt Surface Course - per ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C29	Standard Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Standard Test Method for Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C127	Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregate

ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D242	Standard Specification for Mineral Filler for Bituminous Paving Mixtures
ASTM D946	Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction
ASTM D979	Standard Practice for Sampling Asphalt Paving Mixtures
ASTM D1073	Standard Specification for Fine Aggregate for Asphalt Paving Mixtures
ASTM D1188	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
ASTM D2172	Standard Test Method for Quantitative Extraction of Bitumen from Asphalt Paving Mixtures
ASTM D1461	Standard Test Method for Moisture or Volatile Distillates in Asphalt Paving Mixtures
ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D2489	Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures
ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
ASTM D2950	Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods
ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D3381	Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials

ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4552	Standard Practice for Classifying Hot-Mix Recycling Agents
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D4867	Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D5361	Standard Practice for Sampling Compacted Asphalt Mixtures for Laboratory Testing
ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
ASTM D6084	Standard Test Method for Elastic Recovery of Bituminous Materials by Ductilometer
ASTM D6307	Standard Test Method for Asphalt Content of Hot Mix Asphalt by Ignition Method
ASTM D6373	Standard Specification for Performance Graded Asphalt Binder
ASTM D6752	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Method
ASTM D6925	Standard Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the SuperPave Gyratory Compactor.
ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
ASTM D6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures
ASTM D6995	Standard Test Method for Determining Field VMA based on the Maximum Specific Gravity of the Mix (Gmm)
ASTM E11	Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E950	Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces with an Accelerometer Established Inertial Profiling Reference

ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface
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American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M156	Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
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AASHTO T329	Standard Method of Test for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method
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AASHTO T324	Standard Method of Test for Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures
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AASHTO T 340	Standard Method of Test for Determining the Rutting Susceptibility of Hot Mix Asphalt (APA) Using the Asphalt Pavement Analyzer (APA)
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Asphalt Institute (AI)

Asphalt Institute Handbook MS-26, Asphalt Binder

Asphalt Institute MS-2 Mix Design Manual, 7th Edition

AI State Binder Specification Database

Federal Highway Administration (FHWA)

Long Term Pavement Performance Binder Program

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation
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FAA Orders

5300.1	Modifications to Agency Airport Design, Construction, and Equipment Standards
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Software

FAARFIELD

END OF ITEM P-401

ITEM P-603 EMULSIFIED ASPHALT TACK COAT**DESCRIPTION**

603-1.1 This item shall consist of preparing and treating an asphalt or concrete surface with asphalt material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

603-2.1 ASPHALT MATERIALS. The asphalt material shall be an emulsified asphalt as specified in ASTM D3628 as an asphalt application for tack coat appropriate to local conditions. The emulsified asphalt shall not be diluted. The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the asphalt material to the Resident Project Representative (RPR) before the asphalt material is applied for review and acceptance. The furnishing of COA for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project.

CONSTRUCTION METHODS

603-3.1 WEATHER LIMITATIONS. The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is 50°F or above; the temperature has not been below 35°F for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

603-3.2 EQUIPMENT. The Contractor shall provide equipment for heating and applying the emulsified asphalt material. The emulsion shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the emulsion. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour or seven (700) feet per minute.

The equipment will be tested under pressure for leaks and to ensure proper set-up before use to verify truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application, spray-bar height and pressure and pump speed, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use.

The distributor truck shall be equipped with a minimum 12-foot spreader spray bar with individual nozzle control with computer-controlled application rates. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the emulsion, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper.

The distributor truck shall be equipped to effectively heat and mix the material to the required temperature prior to application as required. Heating and mixing shall be done in accordance with the manufacturer's recommendations. Do not overheat or over mix the material.

The distributor shall be equipped with a hand sprayer.

Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

A power broom and/or power blower suitable for cleaning the surfaces to which the asphalt tack coat is to be applied shall be provided.

603-3.3 APPLICATION OF EMULSIFIED ASPHALT MATERIAL. The emulsified asphalt shall not be diluted. Immediately before applying the emulsified asphalt tack coat, the full width of surface to be treated shall be swept with a power broom and/or power blower to remove all loose dirt and other objectionable material.

The emulsified asphalt material shall be uniformly applied with an asphalt distributor at the rates appropriate for the conditions and surface specified in the table below. The type of asphalt material and application rate shall be approved by the RPR prior to application.

Emulsified Asphalt

Surface Type	Residual Rate, gal/SY	Emulsion Application Bar Rate, gal/SY
New asphalt	0.02-0.05	0.03-0.07
Existing asphalt	0.04-0.07	0.06-0.11
Milled Surface	0.04-0.08	0.06-0.12
Concrete	0.03-0.05	0.05-0.08

After application of the tack coat, the surface shall be allowed to cure without being disturbed for the period of time necessary to permit drying and setting of the tack coat. This period shall be determined by the RPR. The Contractor shall protect the tack coat and maintain the surface until the next course has been placed. When the tack coat has been disturbed by the Contractor, tack coat shall be reapplied at the Contractor's expense.

603-3.4 FREIGHT AND WAYBILLS. The Contractor shall submit waybills and delivery tickets, during progress of the work. Before the final statement is allowed, file with the RPR certified waybills and certified delivery tickets for all emulsified asphalt materials used in the construction of the pavement covered by the contract. Do not remove emulsified asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

METHOD OF MEASUREMENT

603-4.1 The emulsified asphalt material for tack coat shall be measured by the gallon. Volume shall be corrected to the volume at 60°F in accordance with ASTM D1250. The emulsified asphalt material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of emulsified asphalt material

more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas where hand spraying of the emulsified asphalt material is necessary. Water added to emulsified asphalt will not be measured for payment.

BASIS OF PAYMENT

603.5-1 Payment shall be made at the contract unit price per gallon of emulsified asphalt material. This price shall be full compensation for furnishing all materials, for all preparation, delivery, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-603-1	Emulsified Asphalt Tack Coat – per Gallon
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D1250	Standard Guide for Use of the Petroleum Measurement Tables
ASTM D2995	Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors
ASTM D3628	Standard Practice for Selection and Use of Emulsified Asphalts

END ITEM P-603

ITEM P-605 JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 JOINT SEALANTS. Joint sealant materials shall meet the requirements of ASTM D6690.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 BACKER ROD. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be $25\% \pm 5\%$ larger in diameter than the nominal width of the joint.

605-2.3 BOND BREAKING TAPES. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 TIME OF APPLICATION. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 EQUIPMENT. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, seven (7) days prior to use on the project.

a. TRACTOR-MOUNTED ROUTING TOOL. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. CONCRETE SAW. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. SANDBLASTING EQUIPMENT. Sandblasting is not allowed.

d. WATERBLASTING EQUIPMENT. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. HAND TOOLS. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. HOT-POURED SEALING EQUIPMENT. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. COLD-APPLIED, SINGLE-COMPONENT SEALING EQUIPMENT. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 PREPARATION OF JOINTS. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. SAWING. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. SEALING. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw, or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. BACKER ROD. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. BOND-BREAKING TAPE. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 INSTALLATION OF SEALANTS. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/8 inch \pm 1/16 inch (2 mm) below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 INSPECTION. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 CLEAN-UP. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Joint sealing material shall be measured by the linear foot of sealant in place, completed, and accepted.

BASIS OF PAYMENT

605-5.1 Payment for joint sealing material shall be made at the contract unit price per linear foot. The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-605-1	Joint Sealing Filler – per Linear Foot
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt]

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids
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END ITEM P-605

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. Coarse aggregate may only be accepted from sources that have a 20-year service history for the same gradation to be supplied with no history of D-Cracking. Aggregates that do not have a 20-year record of service free from major repairs (less than 5% of slabs replaced) in similar conditions without D-cracking shall not be used unless the material currently being produced has a durability factor greater than or equal to 95 per ASTM C666. The Contractor shall submit a current certification and test results to verify the aggregate acceptability. Test results will only be accepted from a State Department of Transportation (DOT) materials laboratory or an accredited laboratory. Certification and test results which are not dated or which are over one (1) year old or which are for different gradations will not be accepted.

Crushed granite, calcite cemented sandstone, quartzite, basalt, diabase, rhyolite or trap rock are considered to meet the D-cracking test requirements but must meet all other quality tests specified in Item P-501.

610-2.3 FINE AGGREGATE. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 CEMENT. Cement shall conform to the requirements of ASTM C150 Type II or IIA.

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 conforming to the requirements of ASTM A615, A706, A775, and A934.

610-2.11 MATERIALS FOR CURING CONCRETE. Curing materials shall conform to ASTM C171.

CONSTRUCTION METHODS

610-3.1 GENERAL. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 CONCRETE MIXTURE. The concrete shall develop a compressive strength of 4000 psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard. 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 and no separate measurement shall be made.

BASIS OF PAYMENT

610-6.1 Concrete shall be considered incidental and no separate payment shall be made.

Payment will be made under:

Concrete – incidental to other work items

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

END OF ITEM P-610

ITEM P-620 RUNWAY AND TAXIWAY MARKING**DESCRIPTION**

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms “paint” and “marking material” as well as “painting” and “application of markings” are interchangeable throughout this specification.

MATERIALS

620-2.1 MATERIALS ACCEPTANCE. The Contractor shall furnish manufacturer’s certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer’s surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.

620-2.2 MARKING MATERIALS.**Table 1. Marking Materials**

Paint¹				Glass Beads²	
Type	Color	Fed Std. 595 Number	Application Rate Maximum	Type	Application Rate Minimum
Waterborne Type II	White	37925	115 ft ² /gal	III	10 lb/gal
Waterborne Type II	Yellow	33538 or 33655	115 ft ² /gal	III	10 lb/gal
Waterborne Type II	Black	37038	115 ft ² /gal	III	10 lb/gal
Temporary Waterborne Type II	White	37925	230 ft ² /gal	N/A	N/A
Temporary Waterborne Type II	Yellow	33538 or 33655	230 ft ² /gal	N/A	N/A

¹ See paragraph 620-2.2a² See paragraph 620-2.2b

a. PAINT. Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.

Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

b. REFLECTIVE MEDIA. Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D, Type III.

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black paint.

CONSTRUCTION METHODS

620-3.1 WEATHER LIMITATIONS. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 EQUIPMENT. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray. The marking equipment for both paint and beads shall be calibrated daily.

620-3.3 PREPARATION OF SURFACES. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminants that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

a. PREPARATION OF NEW PAVEMENT SURFACES. The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. PREPARATION OF PAVEMENT TO REMOVE EXISTING MARKINGS. Existing pavement markings shall be removed by rotary grinding, water blasting, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings.

c. PREPARATION OF PAVEMENT MARKINGS PRIOR TO REMARKING. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufacturers application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

620-3.4 LAYOUT OF MARKINGS. The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 APPLICATION. A period of 30 days shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch in 50 feet, and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inch or less	±1/2 inch
Greater than 36 inch to 6 feet	±1 inch
Greater than 6 feet to 60 feet	±2 inch
Greater than 60 feet	±3 inch

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

620-3.6 APPLICATION-PREFORMED THERMOPLASTIC AIRPORT PAVEMENT MARKINGS. Preformed thermoplastic pavement markings not used.

620-3.7 CONTROL STRIP. Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

620-3.8 RETRO-REFLECTANCE. Not used.

620-3.9 PROTECTION AND CLEANUP. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1a The quantity of surface preparation shall be measured by lump sum.

620-4.1b The quantity of markings shall be measured by the number of square feet of markings installed.

620-4.1c The quantity of reflective media shall be paid for by the number of pounds of reflective media.

620-4.1d The quantity of temporary markings to be paid for shall be the number of square feet of painting performed in accordance with the specifications and accepted by the RPR. Temporary marking includes surface preparation, application and complete removal of the temporary marking if needed.

BASIS OF PAYMENT

620-5.1 This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item complete in place and accepted by the RPR in accordance with these specifications.

620-5.1a Payment for surface preparation shall be made at the contract price for lump sum.

620-5.2b Payment for markings shall be made at the contract price for the number of square feet of painting.

620-5.3c Payment for reflective media shall be made at the contract unit price for the number of pounds of reflective media.

620-5.4d Payment for temporary markings shall be made at the contract price for the number of square feet of painting. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-620-1	Surface Preparation – per Lump Sum
Item P-620-2	Markings – per Square Foot
Item P-620-3	Temporary Markings - per Square Foot
Item P-620-4	Reflective Media – per Pound

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments

ASTM E303	Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24	Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
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29 CFR Part 1910.1200	Hazard Communication
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Federal Specifications (FED SPEC)

FED SPEC TT-B-1325D Beads (Glass Spheres) Retro-Reflective	
FED SPEC TT-P-1952F	Paint, Traffic and Airfield Marking, Waterborne
FED STD 595	Colors used in Government Procurement

Commercial Item Description

A-A-2886B	Paint, Traffic, Solvent Based
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Advisory Circulars (AC)

AC 150/5340-1	Standards for Airport Markings
AC 150/5320-12	Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

END OF ITEM P-620

ITEM D-701 PIPE FOR STORM DRAINS AND CULVERTS**DESCRIPTION**

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 PIPE. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

AASHTO R73	Standard Practice for Evaluation of Precast Concrete Drainage Productions
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C1479	Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations
ASTM C1840	Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe

701-2.3 CONCRETE. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi at 28 days and conform to the requirements of ASTM C94.

701-2.4 RUBBER GASKETS. Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477. Rubber gaskets for zinc-coated steel pipe and precoated galvanized pipe shall conform to the requirements of ASTM D1056, for the "RE" closed cell grades. Rubber gaskets for steel reinforced thermoplastic ribbed pipe shall conform to the requirements of ASTM F477.

701-2.5 JOINT MORTAR. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 JOINT FILLERS. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 PLASTIC GASKETS. Plastic gaskets shall conform to the requirements of ASTM C990.

701-2.8. CONTROLLED LOW-STRENGTH MATERIAL (CLSM). Not used.

701-2.9 PRECAST BOX CULVERTS. Manufactured in accordance with and conforming to ASTM C1433.

701-2.10 PRECAST CONCRETE PIPE. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 EXCAVATION. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches on each side. The trench walls shall be approximately vertical.

The Contractor shall comply with all current federal, state and local rules and regulations governing the safety of men and materials during the excavation, installation and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch or 1/2 inch for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 BEDDING. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. RIGID PIPE. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. FLEXIBLE PIPE. For flexible pipe, the bed shall be roughly shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

Pipe Corrugation Depth		Minimum Bedding Depth	
inch	mm	inch	mm
1/2	12	1	25
1	25	2	50
2	50	3	75
2-1/2	60	3-1/2	90

c. OTHER PIPE MATERIALS. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of 3/4 inches. For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 (0.075 mm) sieve. For all other areas, no more than 50% of the material shall pass the No. 200 (0.075 mm) sieve. The bedding shall have a thickness of at least 6 inches below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

701-3.3 LAYING PIPE. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 JOINING PIPE. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, or (5) coupling bands.

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. CONCRETE PIPE. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with rubber gaskets meeting ASTM C443 when leak resistant joints are required.

b. METAL PIPE. Not Used.

c. PVC, POLYETHYLENE, OR POLYPROPYLENE PIPE. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. FIBERGLASS PIPE. Not Used.

701-3.5 EMBEDMENT AND OVERFILL. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 EMBEDMENT MATERIAL REQUIREMENTS

a. CONCRETE PIPE. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. PLASTIC AND FIBERGLASS PIPE. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. METAL PIPE. Not Used.

701-3.5-2 PLACEMENT OF EMBEDMENT MATERIAL

The embedment material shall be compacted in layers not exceeding 6 inches on each side of the pipe and shall be brought up one foot above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches and shall be brought up evenly on each side of the pipe to one foot above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 OVERFILL

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and relaid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be placed and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D698. The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 INSPECTION REQUIREMENTS

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Use a camera with lighting suitable to allow a clear picture of the entire periphery of the pipe interior. Center the camera in the pipe both vertically and horizontally and be able to pan and tilt to a 90

degree angle with the axis of the pipe rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

Determine whether the allowable deflection has been exceeded by use of a laser profiler for internal pipe diameters of 48 inches or less, or direct measurement for internal pipe diameters greater than 48 inches. Laser profile equipment shall utilize low barrel distortion video equipment. Deflection of installed pipe shall not exceed the limits provided in the table below, as a percentage of the average inside diameter of the pipe.

Maximum Allowable Pipe Deflection

Type of Pipe	Maximum Allowable Deflection (%)
Concrete Lined CMP	3
Thermoplastic Pipe	5

If deflection readings in excess of the allowable deflection are obtained, remove the pipe with excessive deflection and replace with new pipe. Isolated areas may exceed allowable by 2.5% with concurrence of RPR. Repair or replace any pipe with cracks exhibiting displacement across the crack, bulges, creases, tears, spalls, or delaminations. The report for flexible pipe shall include as a minimum, the deflection results and final post installation inspection report. The inspection report shall include: a copy of all video taken, pipe location identification, equipment used for inspection, inspector name, deviation from design line and grade, and inspector's notes.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

BASIS OF PAYMENT

701-5.0 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.1 Payment will be made at the contract unit price per linear foot for reinforced concrete pipe.

Payment will be made under:

Item 701-1	12 Inch Reinforced Concrete Pipe – per Linear Foot
Item 701-2	15 Inch Reinforced Concrete Pipe – per Linear Foot

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167	Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849	Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe

ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM D1056	Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F667	Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter

ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways
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END ITEM D-701

ITEM D-705 PIPE UNDERDRAINS FOR AIRPORTS

DESCRIPTION

705-1.1 This item shall consist of the construction of pipe drains in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans.

MATERIALS

705-2.1 GENERAL. Materials shall meet the requirements shown on the plans and specified below.

705-2.2 PIPE. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements.

AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
ASTM F758	Standard Specification for Smooth-Wall Poly (Vinyl Chloride) (PVC) Plastic Underdrain Systems for Highway, Airport, and Similar Drainage

705-2.3 JOINT MORTAR. Pipe joint mortar shall consist of one part by volume of Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

705-2.4 ELASTOMERIC SEALS. Elastomeric seals shall conform to the requirements of ASTM F477.

705-2.5 POROUS BACKFILL. Porous backfill shall be free of clay, humus, or other objectionable matter, and shall conform to the gradation in Table 1 when tested in accordance with ASTM C136.

Table 1. Gradation of Porous Backfill

Sieve Designation (square openings)	Percentage by Weight Passing Sieves
	Porous Material No. 2
1-1/2 inch (37.5 mm)	100
1 inch (25.0 mm)	90-100
3/8 inch (9.5 mm)	25-60
No. 4 (4.75 mm)	5-40
No. 8 (2.36 mm)	0-20

705-2.6 GRANULAR MATERIAL. Granular material used for backfilling shall conform to the requirements of ASTM D2321 for Class IA, IB, or II materials.

705-2.7 FILTER FABRIC. The filter fabric shall conform to the requirements of AASHTO M288 Class 2 or equivalent.

Table 2. Fabric Properties

Fabric Property	Test Method	Test Requirement
Grab Tensile Strength, lbs	ASTM D4632	125 min
Grab Tensile Elongation %	ASTM D4632	50 min
Burst Strength, psi	ASTM D3785	125 min
Trapezoid Tear Strength, lbs	ASTM D4533	55 min
Puncture Strength, lbs	ASTM D4833	40 min
Abrasion, lbs	ASTM D4886	15 max loss
Equivalent Opening Size	ASTM D4751	70-100
Permittivity sec ⁻¹	ASTM D4491	0.80
Accelerated Weathering (UV Stability) (Strength Retained - %)	ASTM D4355 *(500 hrs exposure)	70

705-2.8 CONTROLLED LOW-STRENGTH MATERIAL (CLSM). CLSM is not used.

705-2.9 UNDERDRAIN CLEANOUTS. Underdrain cleanouts shall consist of forty-five (45) degree wye, a solid riser pipe, and a set in cast iron cap with a concrete collar at finished grade. The forty-five (45) degree wye and solid pipe shall be schedule forty (40) PVC pipe that meets the requirements of ASTM D-2665. Adapters specifically designed to transition from polyethylene pipe to PVC pipe shall be used to connect the wye to the underdrain pipe.

The cleanout shall be accessible from finish grade. A cast iron valve box riser with a cast iron drop lid shall be provided. The valve box and lid manufacturer shall be ISO certified. The lid shall have the letters "UD" cast into the top of the lid. The valve box riser shall be in close conformity to the dimensions shown on the Plans. A round concrete collar shall be provide with the cast iron riser section centered and cast flush with the top of the concrete. To provide separation between the six (6) inch PVC riser and the concrete collar, an inner Corrugated Metal Pipe (CMP) shall be used. The CMP shall be aluminized Type II. Concrete shall meet the requirements of Specifications section P-610. Precasting of the concrete collar assembly is recommended.

CONSTRUCTION METHODS

705-3.1 EQUIPMENT. All equipment required for the construction of pipe underdrains shall be on the project, in good working condition, and approved by the RPR before construction is permitted to start.

705-3.2 EXCAVATION. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but shall not be less than the external diameter of the pipe plus 6 inches on each side of the pipe. The trench walls shall be approximately vertical.

Where rock, hardpan, or other unyielding material is encountered, it shall be removed below the foundation grade for a depth of at least 4 inches. The excavation below grade shall be backfilled with selected fine compressible material, such as silty clay or loam, and lightly compacted in layers not over 6 inches in uncompacted depth to form a uniform but yielding foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

Excavated material not required or acceptable for backfill shall be disposed of by the Contractor as directed by the RPR. The excavation shall not be carried below the required depth; if this occurs, the trench shall be backfilled at the Contractor's expense with material approved by the RPR and compacted to the density of the surrounding material.

The pipe bedding shall be constructed uniformly over the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 inch when the bedding thickness is less than 6 inches, and 1-1/2 inch when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed, uncompacted material under the middle third of the pipe prior to placement of the pipe.

The Contractor shall do trench bracing, sheathing, or shoring necessary to perform and protect the excavation as required for safety and conformance to federal, state and local laws. Unless otherwise provided, the bracing, sheathing, or shoring shall be removed by the Contractor after the backfill has reached at least 12 inches over the top of the pipe. The sheathing or shoring shall be pulled as the granular backfill is placed and compacted to avoid any unfilled spaces between the trench wall and the backfill material. The cost of bracing, sheathing, or shoring, and the removal of same, shall be included in the unit price bid per foot for the pipe.

705-3.3 LAYING AND INSTALLING PIPE.

a. CONCRETE PIPE. Not Used.

b. METAL PIPE. Not Used.

c. PVC, FIBERGLASS, OR POLYETHYLENE PIPE. PVC or polyethylene pipe shall be installed in accordance with the requirements of ASTM D2321. Perforations shall meet the requirements of AASHTO M252 or AASHTO M294 Class 2, unless otherwise indicated on the plans. The pipe shall be laid accurately to line and grade. Fiberglass per ASTM D3839 Standard Guide for Underground Installation of "Fiberglass" (Glass-Fiber Reinforced Thermosetting-Resin) Pipe.

d. ALL TYPES OF PIPE. The upgrade end of pipelines, not terminating in a structure, shall be plugged or capped as approved by the RPR.

Unless otherwise shown on the plans, a 4-inch bed of granular backfill material shall be spread in the bottom of the trench throughout the entire length under all perforated pipe underdrains.

Pipe outlets for the underdrains shall be constructed when required or shown on the plans. The pipe shall be laid with tight-fitting joints. Porous backfill is not required around or over pipe outlets

for underdrains. All connections to other drainage pipes or structures shall be made as required and in a satisfactory manner. If connections are not made to other pipes or structures, the outlets shall be protected and constructed as shown on the plans.

e. FILTER FABRIC. The filter fabric shall be installed in accordance with the manufacturer's recommendations, or in accordance with the AASHTO M288 Appendix, unless otherwise shown on the plans.

705-3.4 MORTAR. Not Used.

705-3.5 JOINTS IN CONCRETE PIPE. Not Used.

705-3.6 EMBEDMENT AND BACKFILL

a. EARTH. All trenches and excavations shall be backfilled soon after the pipes are installed, unless additional protection of the pipe is directed. The embedment material shall be select material from excavation or borrow and shall be approved by the RPR. The select material shall be placed on each side of the pipe out to a distance of the nominal pipe diameter and one foot over the top of the pipe and shall be readily compacted. It shall not contain stones 3 inches or larger in size, frozen lumps, chunks of highly plastic clay, or any other material that is objectionable to the RPR. The material shall be moistened or dried, as required to aid compaction. Placement of the embedment material shall not cause displacement of the pipe. Thorough compaction under the haunches and along the sides to the top of the pipe shall be obtained.

The embedment material shall be placed in loose layers not exceeding 6 inches in depth under and around the pipe. Backfill material over the pipe shall be placed in lifts not exceeding 8 inches. Successive layers shall be added and thoroughly compacted by hand and pneumatic tampers, approved by the RPR, until the trench is completely filled and brought to the planned elevation. Embedment and backfilling shall be done to avoid damaging top or side of the pipe.

In embankments and other unpaved areas, the backfill shall be compacted per Item P-152 to the density required for embankments in unpaved areas. Under paved areas, the subgrade and any backfill shall be compacted per Item P-152 to the density required for embankments for paved areas.

b. GRANULAR BACKFILL. When granular backfill is required, placement in the trench and about the pipe shall be as shown on the plans. The granular backfill shall not contain an excessive amount of foreign matter, nor shall soil from the sides of the trench or from the soil excavated from the trench be allowed to filter into the granular backfill. When required by the RPR, a template shall be used to properly place and separate the two sizes of backfill. The backfill shall be placed in loose layers not exceeding 6 inches in depth. The granular backfill shall be compacted by hand and pneumatic tampers to the requirements as given for embankment. Backfilling shall be done to avoid damaging top or side pressure on the pipe. The granular backfill shall extend to the elevation of the trench or as shown on the plans.

When perforated pipe is specified, granular backfill material shall be placed along the full length of the pipe. The position of the granular material shall be as shown on the plans. If the original material excavated from the trench is pervious and suitable, it shall be used in lieu of porous backfill No. 1.

If porous backfill is placed in paved or adjacent to paved areas before grading or subgrade operations is completed, the backfill material shall be placed immediately after laying the pipe. The depth of the granular backfill shall be not less than 12 inches, measured from the top of the underdrain. During subsequent construction operations, a minimum depth of 12 inches of backfill

shall be maintained over the underdrains. When the underdrains are to be completed, any unsuitable material shall be removed exposing the porous backfill. Porous backfill containing objectionable material shall be removed and replaced with suitable material. The cost of removing and replacing any unsuitable material shall be at the Contractor's expense.

If a granular subbase blanket course is used which extends several feet beyond the edge of paving to the outside edge of the underdrain trench, the granular backfill material over the underdrains shall be placed in the trench up to an elevation of 2 inches above the bottom surface of the granular subbase blanket course. Immediately prior to the placing of the granular subbase blanket course, the Contractor shall blade this excess trench backfill from the top of the trench onto the adjacent subgrade where it can be incorporated into the granular subbase blanket course. Any unsuitable material that remains over the underdrain trench shall be removed and replaced. The subbase material shall be placed to provide clean contact between the subbase material and the underdrain granular backfill material for the full width of the underdrain trench.

c. CONTROLLED LOW-STRENGTH MATERIAL (CLSM). CLSM is not used.

705-3.7 FLEXIBLE PIPE RING DEFLECTION. The flexible pipe shall be inspected by the Contractor during and after installation to ensure that the internal diameter of the pipe barrel has not been reduced by more than 5 percent. For guidance on properly sizing mandrels, refer to ASTM D3034 and ASTM F679 appendices.

705-3.8 CONNECTIONS. When the plans call for connections to existing or proposed pipe or structures, these connections shall be watertight and made to obtain a smooth uniform flow line throughout the drainage system.

705-3.9 CLEANING AND RESTORATION OF SITE. After the backfill is completed, the Contractor shall dispose of all surplus material, soil, and rubbish from the site. Surplus soil may be deposited in embankments, shoulders, or as directed by the RPR. Except for paved areas of the airport, the Contractor shall restore all disturbed areas to their original condition.

METHOD OF MEASUREMENT

705-4.1 The length of pipe shall be the number of linear feet of pipe underdrains in place, completed, and approved; measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable, including, but not limited to, trench excavation, shoring, dewatering, geotextile fabric, porous backfill, purchasing the pipe, laying the pipe, backfill, cleanup, site restoration and other work as required for the complete installation of the underdrain pipe to the satisfaction of the Engineer. The several classes, types, and sizes shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipeline being measured.

705-4.2 The quantity of pipe underdrains shall be made at the contract unit price per linear foot complete, including porous backfill and filter fabric. No separate measurement shall be made for connecting underdrain outlets to drainage structures or constructing an underdrain daylight structure, but rather they shall be considered incidental to the underdrain pipe installation.

705-4.3 Underdrain cleanouts shall be measured by the number of cleanouts installed, complete, including but not limit to: transition couplings, wye, elbow, corrugated metal pipe, PVC riser pipe, cast iron frame and cover, concrete collar, excavation, bedding, geotextile fabric, backfill and

restoration for the complete installation of the underdrain cleanouts to the satisfaction of the Engineer.

No separate measurement for payment shall be made for underdrain cleanouts installed inside subsurface infiltration trenches. Rather, these cleanouts shall be considered incidental to the installation of the 6" perforated underdrain payment item.

BASIS OF PAYMENT

705-5.1 Payment will be made at the contract unit price per linear foot for pipe underdrains of the type, class, and size designated.

705-5.2 PIPE UNDERDRAINS, COMPLETE. Pipe underdrains, complete (including porous backfill and filter fabric) shall be made at the contract unit price per linear foot complete (including porous backfill and filter fabric).

These prices shall be full compensation for furnishing all materials and for all preparation, excavation, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

705-5.2 UNDERDRAIN CLEANOUT. Underdrain cleanouts shall be made at the contract unit price per each complete. The price shall be full compensation for furnishing all materials and for all preparations, excavation and installation of these materials and for all labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

Item D-705-1	6 Inch Perforated HDPE Underdrain Pipe - per Linear Foot
Item D-705-2	6 Inch Solid PVC Underdrain Pipe – per Linear Foot
Item D-705-3	Underdrain Cleanout – per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C444	Standard Specification for Perforated Concrete Pipe

ASTM C654	Standard Specification for Porous Concrete Pipe
ASTM D2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F758	Standard Specification for Smooth Wall Poly (Vinyl Chloride) (PVC) Plastic Underdrain Systems for Highway, Airport, and Similar Drainage
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M190	Standard Specification for Bituminous - Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M288	Standard Specification for Geotextile Specification for Highway Applications
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500- mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel-Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) diameter
AASHTO	Standard Specifications for Highway Bridges

END OF ITEM D-705

ITEM D-751 MANHOLES, CATCH BASINS, INLETS AND INSPECTION HOLES**DESCRIPTION**

751-1.1 This item shall consist of construction of manholes, catch basins, inlets, and inspection holes, in accordance with these specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the plans or required by the RPR.

MATERIALS

751-2.1 BRICK. The brick shall conform to the requirements of ASTM C32, Grade MS.

751-2.2 MORTAR. Mortar shall consist of one part Portland cement and two parts sand. The cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

751-2.3 CONCRETE. Plain and reinforced concrete used in structures, connections of pipes with structures, and the support of structures or frames shall conform to the requirements of Item P-610.

751-2.4 PRECAST CONCRETE PIPE MANHOLE RINGS. Precast concrete pipe manhole rings shall conform to the requirements of ASTM C478. Unless otherwise specified, the risers and offset cone sections shall have an inside diameter of not less than 36 inches nor more than 48 inches. There shall be a gasket between individual sections and sections cemented together with mortar on the inside of the manhole. Gaskets shall conform to the requirements of ASTM C443.

751-2.5 CORRUGATED METAL. Corrugated metal shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M36.

751-2.6 FRAMES, COVERS, AND GRATES. The castings shall conform to one of the following requirements:

- a. ASTM A48, Class 35B: Gray iron castings
- b. ASTM A47: Malleable iron castings
- c. ASTM A27: Steel castings
- d. ASTM A283, Grade D: Structural steel for grates and frames
- e. ASTM A536, Grade 65-45-12: Ductile iron castings
- f. ASTM A897: Austempered ductile iron castings

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings, aircraft gear configuration and/or direct loading, specified.

Each frame and cover or grate unit shall be provided with fastening members to prevent it from being dislodged by traffic but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

751-2.7 STEPS. The steps or ladder bars shall be gray or malleable cast iron or galvanized steel. The steps shall be the size, length, and shape shown on the plans and those steps that are not galvanized shall be given a coat of asphalt paint, when directed.

751-2.8 PRECAST INLET STRUCTURES. Manufactured in accordance with and conforming to ASTM C913.

CONSTRUCTION METHODS

751-3.1 UNCLASSIFIED EXCAVATION.

a. The Contractor shall excavate for structures and footings to the lines and grades or elevations, shown on the plans, or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximately only; and the RPR may direct, in writing, changes in dimensions or elevations of footings necessary for a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. Where concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing is placed.

c. The Contractor shall do all bracing, sheathing, or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for the structure.

d. All bracing, sheathing, or shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage finished masonry. The cost of removal shall be included in the unit price bid for the structure.

e. After excavation is completed for each structure, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

751-3.2 BRICK STRUCTURES. Not used.

751-3.3 CONCRETE STRUCTURES. Concrete structures which are to be cast-in-place within the project boundaries shall be built on prepared foundations, conforming to the dimensions and shape indicated on the plans. The construction shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

All invert channels shall be constructed and shaped accurately to be smooth, uniform, and cause minimum resistance to flowing water. The interior bottom shall be sloped to the outlet.

751-3.4 PRECAST CONCRETE STRUCTURES. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program.

Precast concrete structures shall conform to ASTM C478. Precast concrete structures shall be constructed on prepared or previously placed slab foundations conforming to the dimensions and locations shown on the plans. All precast concrete sections necessary to build a completed structure shall be furnished. The different sections shall fit together readily. Joints between precast concrete risers and tops shall be full-bedded in cement mortar and shall: (1) be smoothed to a uniform surface on both interior and exterior of the structure or (2) utilize a rubber gasket per ASTM C443. The top of the upper precast concrete section shall be suitably formed and dimensioned to receive the metal frame and cover or grate, or other cap, as required. Provision shall be made for any connections for lateral pipe, including drops and leads that may be installed in the structure. The flow lines shall be smooth, uniform, and cause minimum resistance to flow. The metal or metal encapsulated steps that are embedded or built into the side walls shall be aligned and placed in accordance to ASTM C478. When a metal ladder replaces the steps, it shall be securely fastened into position.

751-3.5 CORRUGATED METAL STRUCTURES. Not used.

751-3.6 INLET AND OUTLET PIPES. Inlet and outlet pipes shall extend through the walls of the structures a sufficient distance beyond the outside surface to allow for connections. They shall be cut off flush with the wall on the inside surface of the structure, unless otherwise directed. For concrete or brick structures, mortar shall be placed around these pipes to form a tight, neat connection.

751-3.7 PLACEMENT AND TREATMENT OF CASTINGS, FRAMES, AND FITTINGS. All castings, frames, and fittings shall be placed in the positions indicated on the plans or as directed by the RPR, and shall be set true to line and elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

When frames or fittings are placed on previously constructed masonry, the bearing surface of the masonry shall be brought true to line and grade and shall present an even bearing surface so the entire face or back of the unit will come in contact with the masonry. The unit shall be set in mortar beds and anchored to the masonry as indicated on the plans or as directed by the RPR. All units shall set firm and secure.

After the frames or fittings have been set in final position, the concrete or mortar shall be allowed to harden for seven (7) days before the grates or covers are placed and fastened down.

751-3.8 INSTALLATION OF STEPS. The steps shall be installed as indicated on the plans or as directed by the RPR. When the steps are to be set in concrete, they shall be placed and secured in position before the concrete is placed. When the steps are installed in brick masonry, they shall be placed as the masonry is being built. The steps shall not be disturbed or used until the concrete or mortar has hardened for at least seven (7) days. After seven (7) days, the steps shall be cleaned and painted, unless they have been galvanized.

When steps are required with precast concrete structures they shall meet the requirements of ASTM C478. The steps shall be cast into the side of the sections at the time the sections are manufactured or set in place after the structure is erected by drilling holes in the concrete and cementing the steps in place.

When steps are required with corrugated metal structures, they shall be welded into aligned position at a vertical spacing of 12 inches.

Instead of steps, prefabricated ladders may be installed. For brick or concrete structures, the ladder shall be held in place by grouting the supports in drilled holes. For metal structures, the ladder shall be secured by welding the top support to the structure and grouting the bottom support into drilled holes in the foundation or as directed by the RPR.

751-3.9 BACKFILLING.

a. After a structure has been completed, the area around it shall be backfilled with approved material, in horizontal layers not to exceed 8 inches in loose depth, and compacted to the density required in Item P-152. Each layer shall be deposited evenly around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

b. Backfill shall not be placed against any structure until approved by the RPR. For concrete structures, approval shall not be given until the concrete has been in place seven (7) days, or until tests establish that the concrete has attained sufficient strength to withstand any pressure created by the backfill and placing methods.

c. Backfill shall not be measured for direct payment. Performance of this work shall be considered an obligation of the Contractor covered under the contract unit price for the structure involved.

751-3.10 CLEANING AND RESTORATION OF SITE. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt, and rubbish from the site. Surplus dirt may be deposited in embankments, shoulders, or as approved by the RPR. The Contractor shall restore all disturbed areas to their original condition. The Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

751-3.11 ADJUSTING FRAMES/COVERS ON EXISTING STRUCTURES. Where shown on the Plans, or as directed by the Engineer, the Contractor shall remove and store the existing frame and grate or cover; remove and dispose of miscellaneous loose mortar and broken bricks; place new reinforced concrete grade ring, new bricks, mortar, concrete collar; reset frame and grate or cover; and restore the surrounding area to the conditions existing prior to work or as shown on the Plans, as necessary to adjust the frame and grate or cover to the grade shown on the Plans.

METHOD OF MEASUREMENT

751-4.1 Manholes, catch basins, inlets, and inspection holes shall be measured by the unit.

751- 4.2 Existing catch basins, leaching catch basin and drain manholes that require the frame and grate or cover to be adjusted due to changes in grade shall be measured for payment per each frame and grate/cover adjusted, complete, including but not limited to; removal of the existing frame and cover or grate, removal and disposal of miscellaneous loose mortar and broken bricks, removal of existing pre-cast top section if required, placement of new reinforced concrete rings and/or cone section as required, new reinforced slab top as required, bricks, mortar, concrete collar, resetting of frame and grate or cover, and restoration of the surrounding area, all to the satisfaction of the Engineer.

BASIS OF PAYMENT

751-5.1 The accepted quantities of manholes, catch basins, inlets, and inspection holes will be paid for at the contract unit price per each in place when completed. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials; furnishing and installation of such specials and connections to pipes and other structures as may be required to complete the item as shown on the plans; and for all labor equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

Item D-751-1	Catch Basin - per each
Item D-751-2	Adjust Existing Frame/Cover – per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A27	Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47	Standard Specification for Ferritic Malleable Iron Castings
ASTM A48	Standard Specification for Gray Iron Castings
ASTM A123	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A283	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536	Standard Specification for Ductile Iron Castings
ASTM A897	Standard Specification for Austempered Ductile Iron Castings
ASTM C32	Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
ASTM C478	Standard Specification for Precast Reinforced Concrete Manhole Sections
ASTM C913	Standard Specification for Precast Concrete Water and Wastewater Structures.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M36

Standard Specification for Corrugated Steel Pipe, Metallic-Coated,
for Sewers and Drains

END OF ITEM D-751

Item D-752 CONCRETE CULVERTS, HEADWALLS, AND MISCELLANEOUS DRAINAGE STRUCTURES

DESCRIPTION

752-1.1 This item shall consist of reinforced concrete culverts, headwalls, and miscellaneous drainage structures constructed in accordance with these specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the plans or required by the RPR.

MATERIALS

752-2.1 CONCRETE. Reinforced concrete shall meet the requirements of Item P-610.

752-2.2 INFILTRATION STONE. Stone for use inside infiltration trench underdrains shall be three-quarters of an inch of crushed stone, conforming to the gradation provided in Table 1.

Table 1
Gradation for Infiltration Stone

Sieve Designation (square openings)	Percentage by Weight Passing Sieves
1 inch (25 mm)	100
3/4 inch (19 mm)	75-90
3/8 inch (9.5 mm)	10 - 30
No. 4 (4.75 mm)	0 - 5

CONSTRUCTION METHODS

752-3.1 UNCLASSIFIED EXCAVATION.

a. Trenches and foundation pits for structures or structure footings shall be excavated to the lines and grades and elevations shown on the plans. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximate only; and the RPR may approve, in writing, changes in dimensions or elevations of footings necessary to secure a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. When concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing steel is placed.

c. The Contractor shall do all bracing, sheathing, or shoring necessary to perform and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for excavation.

d. All bracing, sheathing, or shoring shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage the finished concrete. The cost of removal shall be included in the unit price bid for excavation.

e. After each excavation is completed, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

752-3.2 BACKFILLING.

a. After a structure has been completed, backfilling with approved material shall be accomplished by applying the fill in horizontal layers not to exceed 8 inches in loose depth, and compacted. The field density of the compacted material shall be at least 90% of the maximum density for cohesive soils and 95% of the maximum density for noncohesive soils. The maximum density shall be determined in accordance with ASTM D698. The field density shall be determined in accordance with ASTM D1556.

b. No backfilling shall be placed against any structure until approved by the RPR. For concrete, approval shall not be given until the concrete has been in place seven (7) days, or until tests establish that the concrete has attained sufficient strength to withstand any pressure created by the backfill or the placement methods.

c. Fill placed around concrete culverts shall be deposited on each side at the same time and to approximately the same elevation. All slopes bounding or within the areas to be backfilled shall be stepped or serrated to prevent wedge action against the structure.

d. Backfill will not be measured for direct payment. Performance of this work shall be considered as a subsidiary obligation of the Contractor, covered under the contract unit price for "unclassified excavation for structures."

752-3.3 WEEP HOLES. Weep holes shall be constructed as shown on the plans.

752-3.4 CLEANING AND RESTORATION OF SITE. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt, and rubbish from the site. Surplus dirt may be deposited in embankment, shoulders, or as approved by the RPR. The Contractor shall restore all disturbed areas to their original condition. The Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

752-3.5 SUBSURFACE INFILTRATION TRENCH. Subsurface infiltration trenches shall be constructed in the locations as shown on the plans and as defined herein.

a. The Contractor shall complete all excavation for the subsurface infiltration trenches to the lines and grades or elevations, shown on the Plans, or as staked by the Engineer. The excavation shall be of sufficient size to permit the placing of the full width and length of the subsurface infiltration areas.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the Engineer. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed.

c. The Contractor shall do all bracing, sheathing, or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for the subsurface infiltration area. Unless otherwise provided, bracing, sheathing, or shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. The cost of removal shall be included in the unit price bid for the subsurface infiltration area.

d. The Contractor shall do such dewatering and diversion as necessary to perform and protect the excavation and to permit the installation of the temporary leaching pit or subsurface infiltration area.

e. The Contractor shall wrap all drainage infiltration stone and underdrains as required for the subsurface infiltration areas with geotextile fabric as shown on Plans. The Contractor shall backfill the subsurface infiltration trenches with drainage granular backfill materials and/or as indicated on the Plans or as directed by the Engineer.

f. The Contractor shall install all cleanouts and valve boxes as defined on the plans and as directed by the Engineer.

g. All surplus material excavated shall be legally disposed of off Airport property. Excavation shall not be carried below the required depth; but when it is, the trench shall be backfilled at the Contractor's expense with material approved by the Engineer and compacted to the density required in section P-152 for areas outside of pavement, and P-154 for areas inside the pavement structure.

METHOD OF MEASUREMENT

752-4.1 The quantity of pre-cast flared end sections shall be made for each complete installed structure, including fabric, rip-rap, bedding stone, and any other necessary incidentals.

752-4.2 Subsurface Infiltration Trenches to be paid for shall be the number of square feet of trench, constructed to the lines and grades shown on the plans or as directed by the engineer, furnished, installed and accepted. No separate measurement for payment shall be made for geotextile fabric, infiltration stone, underdrain pipe, valve boxes, cleanouts, fittings, frames, covers and any other equipment or materials needed to complete the installation to the satisfaction of the engineer, rather those items shall be considered incidental to the construction of the subsurface infiltration area.

BASIS OF PAYMENT

752-5.1 Payment will be made at the contract unit price per each for pre-cast flared end sections.

These prices shall be full compensation for furnishing all materials and for all preparation, excavation, and placing the materials, and for all labor, equipment, tools, and incidentals necessary to complete the structure.

752-5.2 Payment shall be made at the contract unit price per square foot of subsurface infiltration trench, measured as specified above and price and payment thereof shall constitute full compensation for all labor, materials, equipment, expenses and incidentals necessary for the satisfactory completion of the seeding.

Payment will be made under:

Item D-752-1	Flared End Section – per Each
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Item D-752-2

Subsurface Infiltration Trench – 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 D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft ³ (600 kN-m/m ³))
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ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
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END OF ITEM D-752

ITEM T-901 SEEDING**DESCRIPTION**

901-1.1 This item shall consist of soil preparation, seeding and fertilizing 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)
K31 Tall Fescue	85	80	45
Red Fescue (Creeping)	85	80	175
Annual Rye	85	80	40
Winter Rye	85	80	65

Seeding shall be performed during the period between April and October inclusive, 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 19-19-19 commercial fertilizer and shall be spread at the rate of 500 pounds per acre.

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 WET APPLICATION METHOD.

a. GENERAL. The Contractor may elect to apply seed and fertilizer (and lime, if required) by spraying them on the previously prepared seedbed in the form of an aqueous mixture and by using the methods and equipment described herein. The rates of application shall be as specified in the special provisions.

b. SPRAYING EQUIPMENT. The spraying equipment shall have a container or water tank equipped with a liquid level gauge calibrated to read in increments not larger than 50 gallons over the entire range of the tank capacity, mounted so as to be visible to the nozzle operator. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The unit shall also be equipped with a pressure pump capable of delivering 100 gallons per minute at a pressure of 100 psi. The pump shall be mounted in a line that will recirculate the mixture through the tank whenever it is not being sprayed from the nozzle. All pump passages and pipe lines shall be capable of providing clearance for 5/8 inch solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. There shall be an indicating pressure gauge connected and mounted immediately at the back of the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture delivered to the nozzle. At least three different types of nozzles shall be supplied so that mixtures may be properly sprayed over distance varying from 20 to 100 feet. One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For case of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings.

In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet in length shall be provided to which the nozzles may be connected.

c. MIXTURES. Lime, if required, shall be applied separately, in the quantity specified, prior to the fertilizing and seeding operations. Not more than 220 pounds of lime shall be added to and mixed with each 100 gallons of water. Seed and fertilizer shall be mixed together in the relative proportions specified, but not more than a total of 220 pounds of these combined solids shall be added to and mixed with each 100 gallons of water.

All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. The Contractor shall identify to the RPR all sources of water at least two (2) weeks prior to use. The RPR may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for

chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the RPR following such tests.

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within two (2) hours from the time they were mixed or they shall be wasted and disposed of at approved locations.

d. SPRAYING. Lime, if required, shall be sprayed only upon previously prepared seedbeds. After the applied lime mixture has dried, the lime shall be worked into the top 3 inches (75 mm), after which the seedbed shall again be properly graded and dressed to a smooth finish.

Mixtures of seed and fertilizer shall only be sprayed upon previously prepared seedbeds on which the lime, if required, shall already have been worked in. The mixtures shall be applied by means of a high-pressure spray that shall always be directed upward into the air so that the mixtures will fall to the ground like rain in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner as might produce erosion or runoff.

Particular care shall be exercised to ensure that the application is made uniformly and at the prescribed rate and to guard against misses and overlapped areas. Proper predetermined quantities of the mixture in accordance with specifications shall be used to cover specified sections of known area.

Checks on the rate and uniformity of application may be made by observing the degree of wetting of the ground or by distributing test sheets of paper or pans over the area at intervals and observing the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the RPR, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

901-3.4 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 or less, randomly dispersed, and do not exceed 3% of the area seeded.

METHOD OF MEASUREMENT

901-4.1 The quantity of seeding to be paid for shall be the number of square yards measured on the ground surface, completed and accepted.

BASIS OF PAYMENT

901-5.1 Payment shall be made at the contract unit price per square yard 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.

Payment will be made under:

Item T-901-1 Seeding – per Square Yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C602 Standard Specification for Agricultural Liming Materials

Federal Specifications (FED SPEC)

FED SPEC JJJ-S-181, Federal Specification, Seeds, Agricultural

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-901

ITEM T-905 TOPSOIL

DESCRIPTION

905-1.1 This item shall consist of preparing the ground surface for topsoil application, removing topsoil from designated stockpiles or areas to be stripped on the site or from approved sources off the site, and placing and spreading the topsoil on prepared areas in accordance with this specification at the locations shown on the plans or as directed by the RPR.

MATERIALS

905-2.1 TOPSOIL. Topsoil shall be the surface layer of soil with no admixture of refuse or any material toxic to plant growth, and it shall be reasonably free from subsoil and stumps, roots, brush, stones (2 inches or more in diameter), and clay lumps or similar objects. Brush and other vegetation that will not be incorporated with the soil during handling operations shall be cut and removed. Ordinary sod and herbaceous growth such as grass and weeds are not to be removed, but shall be thoroughly broken up and intermixed with the soil during handling operations. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means, shall be removed. The topsoil or soil mixture, unless otherwise specified or approved, shall have a pH range of approximately 5.5 pH to 7.6 pH, when tested in accordance with the methods of testing of the Association of Official Agricultural Chemists in effect on the date of invitation of bids. The organic content shall be not less than 3% nor more than 20% as determined by the wet-combustion method (chromic acid reduction). There shall be not less than 20% nor more than 80% of the material passing the 200 mesh sieve as determined by the wash test in accordance with ASTM C117.

Natural topsoil may be amended by the Contractor with approved materials and methods to meet the above specifications.

905-2.2 INSPECTION AND TESTS. Within 10 days following acceptance of the bid, the RPR shall be notified of the source of topsoil to be furnished by the Contractor. The topsoil shall be inspected to determine if the selected soil meets the requirements specified and to determine the depth to which stripping will be permitted. At this time, the Contractor may be required to take representative soil samples from several locations within the area under consideration and to the proposed stripping depths, for testing purposes as specified in paragraph 905-2.1.

CONSTRUCTION METHODS

905-3.1 GENERAL. Areas to be topsoiled shall be shown on the plans. If topsoil is available on the site, the location of the stockpiles or areas to be stripped of topsoil and the stripping depths shall be shown on the plans.

Suitable equipment necessary for proper preparation and treatment of the ground surface, stripping of topsoil, and for the handling and placing of all required materials shall be on hand, in good condition, and approved by the RPR before the various operations are started.

905-3.2 PREPARING THE GROUND SURFACE. Immediately prior to dumping and spreading the topsoil on any area, the surface shall be loosened by discs or spike-tooth harrows, or by other means approved by the RPR, to a minimum depth of 2 inches to facilitate bonding of the topsoil to the covered subgrade soil. The surface of the area to be topsoiled shall be cleared of all stones larger than 2 inches in any diameter and all litter or other material which may be detrimental to proper bonding, the rise of capillary moisture, or the proper growth of the desired planting. Limited areas, as shown on the plans, which are too compact to respond to these operations shall receive special scarification.

Grades on the area to be topsoiled, which have been established by others as shown on the plans, shall be maintained in a true and even condition. Where grades have not been established, the areas shall be smooth-graded and the surface left at the prescribed grades in an even and compacted condition to prevent the formation of low places or pockets where water will stand.

905-3.3 OBTAINING TOPSOIL. Prior to the stripping of topsoil from designated areas, any vegetation, briars, stumps and large roots, rubbish or stones found on such areas, which may interfere with subsequent operations, shall be removed using methods approved by the RPR. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means shall be removed.

When suitable topsoil is available on the site, the Contractor shall remove this material from the designated areas and to the depth as directed by the RPR. The topsoil shall be spread on areas already tilled and smooth-graded, or stockpiled in areas approved by the RPR. Any topsoil stockpiled by the Contractor shall be rehandled and placed without additional compensation. Any topsoil that has been stockpiled on the site by others, and is required for topsoil purposes, shall be removed and placed by the Contractor. The sites of all stockpiles and areas adjacent thereto which have been disturbed by the Contractor shall be graded if required and put into a condition acceptable for seeding.

When suitable topsoil is secured off the airport site, the Contractor shall locate and obtain the supply, subject to the approval of the RPR. The Contractor shall notify the RPR sufficiently in advance of operations in order that necessary measurements and tests can be made. The Contractor shall remove the topsoil from approved areas and to the depth as directed. The topsoil shall be hauled to the site of the work and placed for spreading, or spread as required. Any topsoil hauled to the site of the work and stockpiled shall be rehandled and placed without additional compensation.

905-3.4 PLACING TOPSOIL. The topsoil shall be evenly spread on the prepared areas to a uniform depth of 2 inches after compaction, unless otherwise shown on the plans or stated in the special provisions. Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the work. Spreading shall be carried on so that turving operations can proceed with a minimum of soil preparation or tilling.

After spreading, any large, stiff clods and hard lumps shall be broken with a pulverizer or by other effective means, and all stones or rocks (2 inches or more in diameter), roots, litter, or any foreign matter shall be raked up and disposed of by the Contractor. After spreading is completed, the topsoil shall be satisfactorily compacted by rolling with a cultipacker or by other means approved by the RPR. The compacted topsoil surface shall conform to the required lines, grades, and cross-sections. Any topsoil or other dirt falling upon pavements as a result of hauling or handling of topsoil shall be promptly removed.

METHOD OF MEASUREMENT

905-4.1 Topsoil obtained on the site (respread) shall be measured by the number of cubic yards of topsoil measured in its original position and stripped or excavated. Topsoil stockpiled by others and removed for topsoil by the Contractor shall be measured by the number of cubic yards of topsoil measured in the stockpile. Topsoil shall be measured by volume in cubic yards computed by the method of end areas.

905-4.2 Topsoil obtained off the site (borrow) shall be measured by the number of cubic yards of topsoil measured in its original position and stripped or excavated. Topsoil shall be measured by volume in cubic yards computed by the method of end areas.

BASIS OF PAYMENT

905-5.1 Payment will be made at the contract unit price per cubic yard for topsoil (obtained on the site). This price shall be full compensation for furnishing all materials and for all preparation, placing, and spreading of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

905-5.2 Payment will be made at the contract unit price per cubic yard for topsoil (obtained off the site). This price shall be full compensation for furnishing all materials and for all preparation, placing, and spreading of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item T-905-1	Topsoil (Respread) – per cubic yard
Item T-905-2	Topsoil (Borrow) – per cubic yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C117	Materials Finer than 75 μm (No. 200) Sieve in Mineral Aggregates by Washing
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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-905

ITEM L-107 AIRPORT WIND CONES**DESCRIPTION**

107-1.1 This item shall consist of removal of existing airport wind cone; furnishing and installing an airport wind cone per these specifications and per the dimensions, design, and details shown in the plans.

The work shall include the furnishing and installation of a support for mounting the wind cone, the specified interconnecting wire, concrete foundation, and crushed stone around the wind cone assembly. The item shall also include all cable connections, conduit and conduit fittings, the furnishing and installation of all lamps, ground rod and ground connection, the testing of the installation, and all incidentals necessary to place the wind cone in operation (as a completed unit) to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS**107-2.1 GENERAL.**

a. Airport lighting equipment and materials covered by advisory circulars (ACs) shall be certified in AC 150/5345-53, Airport Lighting Equipment Certification Program (ALECP) and listed in the ALECP Addendum.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.

c. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications, at the Contractor's cost.

d. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). 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 in electronic pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or

procedures, that do not meet the system design and the standards and codes, specified in this document.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for 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.

107-2.2 WIND CONES. The wind cone assembly shall be Type L-807, Style I-B, Size 1, complete with L-830 100 W (or as required by wind cone manufacturer), 2.8-6.6 ampere transformer powered from the runway lighting circuit.

107-2.3 ELECTRICAL WIRE AND CABLE. Cable rated up to 5,000 volts in conduit shall conform to AC 150/5345-7, Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits. For ratings up to 600 volts, moisture and heat-resistant thermoplastic wire conforming to Commercial Item Description A-A-59544A Type THWN-2 shall be used. The wires shall be of the type, size, number of conductors, and voltage shown in the plans or in the proposal.

107-2.4 CONDUIT. Rigid steel conduit and fittings shall conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242.

107-2.5 PLASTIC CONDUIT (FOR USE BELOW GRADE ONLY). Plastic conduit and fittings shall be per the following:

- 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 (polyvinyl chloride (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 Standard UL-651 shall be one of the following, as shown in the plans:

a. Type I-Schedule 40 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.

Plastic conduit adhesive shall be a solvent cement manufactured specifically for the purpose of gluing the type of plastic conduit and fitting.

107-2.6 CONCRETE. The concrete for foundations shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

107-2.7 PAINT.

a. Priming paint for non-galvanized metal surfaces shall be a high solids alkyd primer compatible with the manufacturer's recommendations for the intermediate or topcoat.

b. Priming paint for galvanized metal surfaces shall be zinc dust-zinc oxide primer paint conforming to MIL-DTL-24441C/19B. Use MIL-24441 thinner per paint manufacturer's recommendations.

c. Orange paint for the body and the finish coats on metal and wood surfaces shall consist of a ready-mixed non-fading paint per Master Painter's Institute (MPI) Reference #9 (gloss). The color shall be per Federal Standards 595, International Orange, Number 12197.

d. White paint for body and finish coats on metal and wood surfaces shall be ready-mixed paint conforming to the MPI, Reference #9, Exterior Alkyd, Gloss.

e. Priming paint for wood surfaces shall be mixed on the job by thinning the above specified aviation-orange or white paint by adding 1/2 pint of raw linseed oil to each gallon.

CONSTRUCTION METHODS

107-3.1 INSTALLATION. The hinged support or hinged pole shall be installed on a concrete foundation per the plans.

107-3.2 SUPPORT POLE ERECTION. The Contractor shall erect the pole on the foundation following the manufacturer's requirements and erection details. The pole shall be level and secure.

107-3.3 ELECTRICAL CONNECTION. The Contractor shall furnish all labor and materials and shall make complete electrical connections per the wiring diagram furnished with the project plans. The electrical installation shall conform to the requirements of the latest edition of National Fire Protection Association, NFPA-70, National Electric Code (NEC).

Underground cable and duct for cable installation shall be installed in accordance with Item L-108, Underground Power Cables for Airports, and Item L-110, Airport Underground Electrical Duct Banks and Conduits in locations as shown on the plans.

107-3.4 BOOSTER TRANSFORMER. Not used.

107-3.5 GROUND CONNECTION AND GROUND ROD. The Contractor shall furnish and install a ground rod, grounding cable, and ground clamps for grounding the "A" frame of the 12-foot assembly or pipe support of the 8-foot support near the base. The ground rod shall be of the type, diameter and length specified in Item L-108, Underground Power Cable for Airports. The ground rod shall be driven into the ground adjacent to the concrete foundation (minimum distance from foundation of 2 feet so that the top is at least 6 inches below grade. The grounding cable shall consist of No. 6 American wire gauge (AWG) minimum stranded copper wire or larger and shall be firmly attached to the ground rod by exothermic welding. If an exothermic weld is not possible, connections to the grounding bus shall be made by using connectors approved for direct burial in soil or concrete per UL 467. The other end of the grounding cable shall be securely attached to a leg of the frame or to the base of the pipe support with non-corrosive metal and shall be of substantial construction. The resistance to ground shall not exceed 25 ohms. If a single rod grounding electrode has a resistance to earth of over 25 ohms, then install one supplemental rod not less than 10 feet from the first rod. If desired resistance to ground levels are still not achieved, see FAA-STD-019 for guidance on the application of coke breeze.

107-3.6 PAINTING. Three coats of paint shall be applied (one prime, one body, and one finish) to all exposed material installed under this item except the fabric cone, obstruction light globe, and lamp reflectors. The wind cone assembly, if already painted upon receipt, shall be given one finish coat of paint in lieu of the three coats specified above. The paint shall be per MPI Reference #9 (gloss). The color shall be per Federal Standard 595, International Orange, Number 12197.

107-3.7 LIGHT SOURCES. The Contractor shall furnish and install lamps per the manufacturer's instruction book.

107-3.8 CHAIN AND PADLOCK. The Contractor shall furnish and install a suitable operating chain for lowering and raising the hinged top section. The chain shall be attached to the pole support in a manner to prevent the light fixture assembly from striking the ground in the lowered position.

A padlock shall also be furnished by the Contractor on the 8-foot wind cone for securing the hinged top section to the fixed lower section. Keys for the padlock shall be delivered to the RPR.

107-3.9 SEGMENTED CIRCLE. Not used.

METHOD OF MEASUREMENT

107-4.1 The quantity to be paid shall be the number of wind cones installed as completed units in place, accepted, and ready for operation.

BASIS OF PAYMENT

107-5.1 Payment will be made at the contract unit price for each completed and accepted job. This price shall be full compensation for removal of existing airport wind cone; furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item L-107-1	Primary Wind Cone (Internally Lighted) - per Each
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-5	Segmented Circle Airport Marker System
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 150/5345-27	Specification for Wind Cone Assemblies
AC 150/5345-53	Airport Lighting Equipment Certification Program

Commercial Item Description

A-A-59544	Cable and Wire, Electrical (Power, Fixed Installation)
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Federal Standard (FED STD)

FED STD 595	Colors Used in Government Procurement
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Master Painter's Institute (MPI)

MPI Reference #9	Alkyd, Exterior, Gloss (MPI Gloss Level 6)
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Mil Standard

MIL-DTL-24441C/19B Paint, Epoxy-Polyamide, Zinc Primer, Formula 159, Type III

Underwriters Laboratories (UL)

UL Standard 6	Electrical Rigid Metal Conduit – Steel
UL Standard 514B	Conduit, Tubing, and Cable Fittings
UL Standard 514C	Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 651	Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
UL Standard 651A	Type EB and A Rigid PVC Conduit and HDPE Conduit
UL Standard 1242	Electrical Intermediate Metal Conduit - Steel

National Fire Protection Association (NFPA)

NFPA-70	National Electric Code (NEC)
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END OF ITEM L-107

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 or copper-clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case be less than 10 feet long and 3/4 inch in diameter.

108-2.4 CABLE CONNECTIONS. In-line connections or splices of underground primary cables shall be of the type called for on the plans, and shall be one of the types listed below. No separate payment will be made for cable connections.

a. THE CAST SPLICE. A cast splice, employing a plastic mold and using epoxy resin equivalent to that manufactured by 3M™ Company, "Scotchcast" Kit No. 82-B, or an approved equivalent, used for potting the splice is acceptable.

b. THE FIELD-ATTACHED PLUG-IN SPLICE. Field attached plug-in splices shall be installed as shown on the plans. The Contractor shall determine the outside diameter of the cable to be spliced and furnish appropriately sized connector kits and/or adapters. Tape or heat shrink tubing with integral sealant shall be in accordance with the manufacturer's requirements. Primary Connector Kits manufactured by Amerace, "Super Kit", Integro "Complete Kit", or approved equal is acceptable.

c. THE FACTORY-MOLDED PLUG-IN SPLICE. Specification for L-823 Connectors, Factory-Molded to Individual Conductors, is acceptable.

d. THE TAPED OR HEAT-SHRINK SPLICE. Taped splices employing field-applied rubber, or synthetic rubber tape covered with plastic tape is acceptable. The rubber tape should meet the requirements of ASTM D4388 and the plastic tape should comply with Military Specification MIL-I-24391 or Commercial Item Description A-A-55809. Heat shrinkable tubing shall be heavy-wall, self-sealing tubing rated for the voltage of the wire being spliced and suitable for direct-buried installations. The tubing shall be factory coated with a thermoplastic adhesive-sealant that will adhere to the insulation of the wire being spliced forming a moisture- and dirt-proof seal. Additionally, heat shrinkable tubing for multi-conductor cables, shielded cables, and armored cables shall be factory kits that are designed for the application. Heat shrinkable tubing and tubing kits shall be manufactured by Tyco Electronics/ Raychem Corporation, Energy Division, or approved equivalent.

In all the above cases, connections of cable conductors shall be made using crimp connectors using a crimping tool designed to make a complete crimp before the tool can be removed. All L-823/L-824 splices and terminations shall be made per the manufacturer's recommendations and listings.

All connections of counterpoise, grounding conductors and ground rods shall be made by the exothermic process or approved equivalent, except that a light base ground clamp connector shall be used for attachment to the light base. All exothermic connections shall be made per the manufacturer's recommendations and listings.

108-2.5 SPLICER QUALIFICATIONS. Every airfield lighting cable splicer shall be qualified in making airport cable splices and terminations on cables rated at or above 5,000 volts AC. The Contractor shall submit to the RPR proof of the qualifications of each proposed cable splicer for the airport cable type and voltage level to be worked on. Cable splicing/terminating personnel shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.

108-2.6 CONCRETE. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

108-2.7 FLOWABLE BACKFILL. Not Used.

108-2.8 CABLE IDENTIFICATION TAGS. Cable identification tags shall be made from a non-corrosive material with the circuit identification stamped or etched onto the tag. The tags shall be of the type as detailed on the plans.

108-2.9 TAPE. Electrical tapes shall be Scotch™ Electrical Tapes –Scotch™ 88 (1-1/2 inch wide) and Scotch™ 130C® linerless rubber splicing tape (2-inch wide), as manufactured by the Minnesota Mining and Manufacturing Company (3M™), or an approved equivalent.

108-2.10 ELECTRICAL COATING. Electrical coating shall be Scotchkote™ as manufactured by 3M™, or an approved equivalent.

108-2.11 EXISTING CIRCUITS. Whenever the scope of work requires connection to an existing circuit, the existing circuit's insulation resistance shall be tested, in the presence of the RPR. The test shall be performed per this item and prior to any activity that will affect the respective circuit. The Contractor shall record the results on forms acceptable to the RPR. When the work affecting the circuit is complete, the circuit's insulation resistance shall be checked again, in the presence of the RPR. The Contractor shall record the results on forms acceptable to the RPR. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs to the existing circuit to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, if necessary, shall be borne by the Contractor. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.

108-2.12 DETECTABLE WARNING TAPE. Plastic, detectable, American Public Works Association (APWA) Red (electrical power lines, cables, conduit and lighting cable) with continuous legend tape shall be polyethylene film with a metalized foil core and shall be 3-6 inches wide. Detectable tape is incidental to the respective bid item. Detectable warning tape for communication cables shall be orange. Detectable warning tape color code shall comply with the APWA Uniform Color Code.

CONSTRUCTION METHODS

108-3.1 GENERAL. The Contractor shall install the specified cable at the approximate locations indicated on the plans. Unless otherwise shown on the plans, all cable required to cross under pavements expected to carry aircraft loads shall be installed in concrete encased duct banks. Cable shall be run without splices, from fixture to fixture.

Cable connections between lights will be permitted only at the light locations for connecting the underground cable to the primary leads of the individual isolation transformers. The Contractor shall be responsible for providing cable in continuous lengths for home runs or other long cable runs without connections unless otherwise authorized in writing by the RPR or shown on the plans.

In addition to connectors being installed at individual isolation transformers, L-823 cable connectors for maintenance and test points shall be installed at locations shown on the plans. Cable circuit identification markers shall be installed on both sides of the L-823 connectors installed and on both sides of slack loops where a future connector would be installed.

Provide not less than 3 feet of cable slack on each side of all connections, isolation transformers, light units, and at points where cable is connected to field equipment. Where provisions must be made for testing or for future above grade connections, provide enough slack to allow the cable to be extended at least one foot vertically above the top of the access structure. This requirement also applies where primary cable passes through empty light bases, junction boxes, and access structures to allow for future connections, or as designated by the RPR.

Primary airfield lighting cables installed shall have cable circuit identification markers attached on both sides of each L-823 connector and on each airport lighting cable entering or leaving cable access points, such as manholes, hand holes, pull boxes, junction boxes, etc. Markers shall be of sufficient length for imprinting the cable circuit identification legend on one line, using letters not less than 1/4 inch in size. The cable circuit identification shall match the circuits noted on the construction plans.

108-3.2 INSTALLATION IN DUCT BANKS OR CONDUITS. This item includes the installation of the cable in duct banks or conduit per the following paragraphs. The maximum number and voltage ratings of cables installed in each single duct or conduit, and the current-carrying capacity of each cable shall be per the latest version of the National Electric Code, or the code of the local agency or authority having jurisdiction.

The Contractor shall make no connections or splices of any kind in cables installed in conduits or duct banks.

Unless otherwise designated in the plans, where ducts are in tiers, use the lowest ducts to receive the cable first, with spare ducts left in the upper levels. Check duct routes prior to construction to obtain assurance that the shortest routes are selected and that any potential interference is avoided.

Duct banks or conduits shall be installed as a separate item per Item L-110, Airport Underground Electrical Duct Banks and Conduit. The Contractor shall run a mandrel through duct banks or conduit prior to installation of cable to ensure that the duct bank or conduit is open, continuous and clear of debris. The mandrel size shall be compatible with the conduit size. The Contractor shall swab out all conduits/ducts and clean light bases, manholes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed, the light bases and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, light bases, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be re-cleaned at the Contractor's expense. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

The cable shall be installed in a manner that prevents harmful stretching of the conductor, damage to the insulation, or damage to the outer protective covering. The ends of all cables shall be sealed with moisture-seal tape providing moisture-tight mechanical protection with minimum bulk, or alternately, heat shrinkable tubing before pulling into the conduit and it shall be left sealed until connections are made. Where more than one cable is to be installed in a conduit, all cable shall be pulled in the conduit at the same time. The pulling of a cable through duct banks or conduits may be accomplished by hand winch or power winch with the use of cable grips or pulling eyes. Maximum pulling tensions shall not exceed the cable manufacturer's recommendations. A non-hardening cable-pulling lubricant recommended for the type of cable being installed shall be used where required.

The Contractor shall submit the recommended pulling tension values to the RPR prior to any cable installation. If required by the RPR, pulling tension values for cable pulls shall be monitored by a dynamometer in the presence of the RPR. Cable pull tensions shall be recorded by the Contractor and reviewed by the RPR. Cables exceeding the maximum allowable pulling tension values shall be removed and replaced by the Contractor at the Contractor's expense.

The manufacturer's minimum bend radius or NEC requirements (whichever is more restrictive) shall apply. Cable installation, handling and storage shall be per manufacturer's recommendations. During cold weather, particular attention shall be paid to the manufacturer's minimum installation temperature. Cable shall not be installed when the temperature is at or below the manufacturer's minimum installation temperature. At the Contractor's option, the Contractor may submit a plan, for review by the RPR, for heated storage of the cable and maintenance of an acceptable cable temperature during installation when temperatures are below the manufacturer's minimum cable installation temperature.

Cable shall not be dragged across base can or manhole edges, pavement or earth. When cable must be coiled, lay cable out on a canvas tarp or use other appropriate means to prevent abrasion to the cable jacket.

108-3.3 INSTALLATION OF DIRECT-BURIED CABLE IN TRENCHES. Unless otherwise specified, the Contractor shall not use a cable plow for installing the cable. Cable shall be unreeled uniformly in place alongside or in the trench and shall be carefully placed along the bottom of the trench. The cable shall not be unreeled and pulled into the trench from one end. Slack cable sufficient to provide strain relief shall be placed in the trench in a series of S curves. Sharp bends or kinks in the cable shall not be permitted.

Where cables must cross over each other, a minimum of 3 inches vertical displacement shall be provided with the topmost cable depth at or below the minimum required depth below finished grade.

a. TRENCHING. Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored. Trenches for cables may be excavated manually or with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of surface is disturbed. Graders shall not be used to excavate the trench with their blades. The bottom surface of trenches shall be essentially smooth and free from coarse aggregate. Unless otherwise specified, cable trenches shall be excavated to a minimum depth of 18 inches below finished grade per NEC Table 300.5, except as follows:

- When off the airport or crossing under a roadway or driveway, the minimum depth shall be 36 inches unless otherwise specified.
- Minimum cable depth when crossing under a railroad track, shall be 42 inches unless otherwise specified.

The Contractor shall excavate all cable trenches to a width not less than 6 inches. Unless otherwise specified on the plans, all cables in the same location and running in the same general direction shall be installed in the same trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches below the required cable depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. Flowable backfill material may alternatively be used.

Duct bank or conduit markers temporarily removed for trench excavations shall be replaced as required.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

(1) Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred.

(2) Trenching, etc., in cable areas shall then proceed, with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair or replacement.

b. BACKFILLING. After the cable has been installed, the trench shall be backfilled. The first layer of backfill in the trench shall encompass all cables ; be 3 inches deep, loose measurement; and shall be either earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. This layer shall not be compacted. The second layer shall be 5 inches deep, loose measurement, and shall contain no particles that would be retained on a one inch sieve. The remaining third and subsequent layers of backfill shall not exceed 8 inches of loose measurement and be excavated or imported material and shall not contain stone or aggregate larger than 4 inches maximum diameter.

The second and subsequent layers shall be thoroughly tamped and compacted to at least the density of the adjacent material. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be to a minimum of 100 percent of ASTM D1557.

Trenches shall not contain pools of water during backfilling operations. The trench shall be completely backfilled and tamped level with the adjacent surface, except that when turf is to be established over the trench, the backfilling shall be stopped at an appropriate depth consistent with the type of turving operation to be accommodated. A proper allowance for settlement shall also be provided. Any excess excavated material shall be removed and disposed of per the plans and specifications.

Underground electrical warning (caution) tape shall be installed in the trench above all direct-buried cable. Contractor shall submit a sample of the proposed warning tape for acceptance by the RPR. If not shown on the plans, the warning tape shall be located 6 inches above the direct-buried cable or the counterpoise wire if present. A 3-6 inch wide polyethylene film detectable tape, with a metalized foil core, shall be installed above all direct buried cable or counterpoise. The tape shall be of the color and have a continuous legend as indicated on the plans. The tape shall be installed 8 inches minimum below finished grade.

c. RESTORATION. Following restoration of all trenching near airport movement surfaces, the Contractor shall visually inspect the area for foreign object debris (FOD) and remove any that is found. Where soil and sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by work shall be restored to its original condition. The restoration shall include the topsoiling, fertilizing, and seeding as shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. When trenching is through paved areas, restoration shall be equal to existing conditions. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be to a minimum of 100 percent of ASTM D1557 . Restoration shall be considered incidental to the pay item of which it is a component part.

108-3.4 CABLE MARKERS FOR DIRECT-BURIED CABLE. The location of direct buried circuits shall be marked by a concrete slab marker, 2 feet square and 4-6 inch thick, extending approximately one inch above the surface. Each cable run from a line of lights and signs to the equipment vault shall be marked at approximately every 200 feet along the cable run, with an additional marker at each change of direction of cable run. All other direct-buried cable shall be marked in the same manner. Cable markers shall be installed directly above the cable. The Contractor shall impress the word "CABLE" and directional arrows on each cable marking slab. The letters shall be approximately 4

inches 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. The counterpoise size is as shown on the plans. The equipotential method is applicable to all airfield lighting systems; i.e. runway, taxiway, apron – touchdown zone, centerline, edge, threshold and approach lighting systems. The equipotential method is also successfully applied to provide lightning protection for power, signal and communication systems. The light bases, counterpoise, etc. – all components - are bonded together and bonded to the vault power system ground loop/electrode.

Counterpoise wire shall be installed in the same trench for the entire length of buried cable, conduits and duct banks that are installed to contain airfield cables. The counterpoise is centered over the cable/conduit/duct to be protected.

The counterpoise conductor shall be installed no less than 8 inches minimum or 12 inches maximum above the raceway or cable to be protected, except as permitted below:

(1) The minimum counterpoise conductor height above the raceway or cable to be protected shall be permitted to be adjusted subject to coordination with the airfield lighting and pavement designs.

(2) The counterpoise conductor height above the protected raceway(s) or cable(s) shall be calculated to ensure that the raceway or cable is within a 45-degree area of protection, (45 degrees on each side of vertical creating a 90-degree angle).

The counterpoise conductor shall be bonded to each metallic light base, mounting stake, and metallic airfield lighting component.

All metallic airfield lighting components in the field circuit on the output side of the constant current regulator (CCR) or other power source shall be bonded to the airfield lighting counterpoise system.

All components rise and fall at the same potential; with no potential difference, no damaging arcing and no damaging current flow.

See AC 150/5340-30, Design and Installation Details for Airport Visual Aids and NFPA 780, Standard for the Installation of Lightning Protection Systems, Chapter 11, for a detailed description of the Equipotential Method of lightning protection.

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. Counterpoise size is as shown on the plans. 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 halfway between the pavement edge and the light base, mounting stake, raceway, or cable being protected.

The counterpoise conductor shall be installed 8 inches 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 50 megohms. Verify continuity of all series airfield lighting circuits prior to energization.

f. That the insulation resistance to ground of all new non-grounded conductors of new multiple circuits or circuit segments is not less than 100 megohms.

g. That all affected circuits (existing and new) are properly connected per applicable wiring diagrams.

h. That all affected circuits (existing and new) are operable. Tests shall be conducted that include operating each control not less than 10 times and the continuous operation of each lighting and power circuit for not less than 1/2 hour.

i. That the impedance to ground of each ground rod does not exceed 25 ohms prior to establishing connections to other ground electrodes. The fall-of-potential ground impedance test shall be used, as described by American National Standards Institute/Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81, to verify this requirement. As an alternate, clamp-on style ground impedance test meters may be used to satisfy the impedance testing requirement. Test equipment and its calibration sheets shall be submitted for review and approval by the RPR prior to performing the testing.

Two copies of tabulated results of all cable tests performed shall be supplied by the Contractor to the RPR. Where connecting new cable to existing cable, insulation resistance tests shall be performed on the new cable prior to connection to the existing circuit.

There are no approved "repair" procedures for items that have failed testing other than complete replacement.

METHOD OF MEASUREMENT

108-4.1 The cost of all excavation, backfill, dewatering and restoration regardless of the type of material encountered shall be included in the unit price bid for the work.

108-4.2 Cable or counterpoise wire installed in trench, duct bank or conduit shall be measured by the number of linear feet installed and grounding connectors, and trench marking tape ready for operation, and accepted as satisfactory. Separate measurement shall be made for each cable or counterpoise wire installed in trench, duct bank or conduit. The measurement for this item shall include additional quantities required for slack.

108-4.3 No separate payment will be made for ground rods.

BASIS OF PAYMENT

108-5.1 Payment will be made at the contract unit price for trenching, cable and bare counterpoise wire installed in trench (direct-buried), or cable and equipment ground installed in duct bank or conduit, in place by the Contractor and accepted by the RPR. This price shall be full compensation for furnishing all materials and for all preparation and installation of these materials, and for all labor,

equipment, tools, and incidentals, including ground rods and ground connectors and trench marking tape, necessary to complete this item.

Payment will be made under:

Item L-108-1	# 8 AWG, 5 kV, L-824, Type C Cable - per linear foot
Item L-108-2	#6 AWG, Solid, Bare Copper Counterpoise Wire - per linear foot
Item L-108-3	#6 AWG, 600 V Insulated Stranded Copper Conductor – per linear foot
Item L-108-4	#6 AWG, 600 V Insulated Stranded Grounding Conductor – per linear foot
Item L-108-5	#8 AWG, 600 V Insulated Stranded Copper Conductor – per linear foot
Item L-108-6	#8 AWG, 600 V Insulated Stranded Grounding Conductor – 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

Federal Aviation Administration Standard

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

END OF ITEM L-108

ITEM L-109 AIRPORT TRANSFORMER VAULT AND VAULT EQUIPMENT**DESCRIPTION**

109-1.1 This item shall consist of removing an existing airport transformer vault and all associated equipment in it and; constructing an airport transformer vault or a prefabricated metal housing per these specifications and per the design and dimensions shown in the plans. This work shall also include the installation of conduits in the floor and foundation, painting and lighting of the vault or metal housing, and the furnishing of all incidentals that are necessary to produce a completed unit. Included as a separate part under this item or as a separate item where an existing vault is to be used shall be the furnishing of all vault equipment, wiring, electrical buses, cable, conduit, potheads, and grounding systems. This work shall also include the painting of equipment and conduit; the marking and labeling of equipment and the labeling or tagging of wires; the testing of the installation; and the furnishing of all incidentals necessary to place it in operating condition as a completed unit to the satisfaction of the RPR.

Also included in this item are new electrical service connection with new utility metering, permits, inspections, testing and the furnishing of all incidentals necessary to complete this item. REILs and Airport owned PAPI will also be powered from the new vault. Provisions for connection of a portable standby generator shall be included.

EQUIPMENT AND MATERIALS**109-2.1 GENERAL.**

a. Airport lighting equipment and materials covered by advisory circulars (AC) shall be certified in AC 150/5345-53, Airport Lighting Equipment Certification Program (ALECP) and listed in the ALECP Addendum.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.

c. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.

d. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or

circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

e. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be provided in electronic pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING

109-3.1 ELECTRICAL VAULT BUILDING. The electrical vault building must comply with NEC Article 110.31, Enclosure for Electrical Installations, Item (A) Electrical Vaults. Construct the building of materials having adequate structural strength for the conditions and installed location, has a minimum fire rating of two or three hours as determined by the authority having jurisdiction (AHJ), and is bullet resistant to minimum UL 752 Level 4.

109-3.2 CONCRETE. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

109-3.3 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.

109-3.4 REINFORCING STEEL. Reinforcing steel bars shall be intermediate or structural grade deformed-type bars and shall be per ASTM A615.

109-3.5 BRICK. Brick shall be per ASTM C62, Grade SW.

109-3.6 RIGID STEEL CONDUIT. Rigid steel conduit and fittings shall be per Underwriters Laboratories Standards 6 and 514B.

109-3.7 PLASTIC CONDUIT AND FITTINGS. Plastic Conduit and fittings shall conform to the requirements of UL-651 and UL-654 schedule 40 polyvinyl chloride (PVC) suitable for use above or below ground.

109-3.8 LIGHTING. Vault or metal-housing LED light fixtures shall be of a vapor-proof type.

109-3.9 OUTLETS. Convenience outlets shall be heavy-duty 20 ampere rated duplex units designed for industrial service.

109-3.10 SWITCHES. Vault or metal-housing light switches shall be 20 ampere rated single-pole switches.

109-3.11 PAINT.

a. Priming paint for non-galvanized metal surfaces shall be a high solids alkyd primer compatible with the manufacturer's recommendations for the intermediate or topcoat.

b. White paint for body and finish coats on metal and wood surfaces shall be ready-mixed paint conforming to the Master Painter's Institute (MPI), Reference #9, Exterior Alkyd, Gloss.

c. Priming paint for wood surfaces shall be mixed on the job by thinning the specified white paint by adding 1/2 pint of raw linseed oil to each gallon.

d. Paint for the floor, ceiling, and inside walls shall be per Porter Paint Company 69, 71, and 79 or equivalent. Walls and ceiling shall be light gray and the floor shall be medium gray.

e. The roof coating shall be hot asphalt material per ASTM D2823. Asbestos-free roof coating per ASTM D4479 may be substituted if required by local codes.

109-3.12 GROUND BUS. Ground bus shall be 1/8 × 3/4 inch minimum copper bus bar.

109-3.13 SQUARE DUCT. Duct shall be square similar to that manufactured by the Square D Company (or equivalent), or the Trumbull Electric Manufacturing Company (or equivalent). The entire front of the duct on each section shall consist of hinged or removable cover for ready access to the interior. The cross-section of the duct shall be not less than 4 × 4 inch except where otherwise shown in the plans or required by Code based on conductor fill

109-3.14 GROUND RODS. Ground rods shall be in accordance with Item L-108.

109-3.15 VAULT PREFABRICATED METAL HOUSING. The prefabricated metal housing shall be a commercially available unit.

109-3.16 FAA-APPROVED EQUIPMENT. Certain items of airport lighting equipment installed in vaults are covered by individual ACs listed below:

AC 150/5345-3	Specification for L-821, Panels for Remote Control of Airport Lighting
AC 150/5345-5	Circuit Selector Switch
AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-10	Specification for Constant Current Regulators and Regulator Monitors
AC 150/5345-13	Specification for L-841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport Lighting Circuits.
AC 150/5345-49	Specification for L-854, Radio Control Equipment
AC 150/5345-56	Specification for L-890 Airport Lighting Control and Monitoring System (ALCMS)

109-3.17 OTHER ELECTRICAL EQUIPMENT. Distribution transformers, oil switches, cutouts, relays, terminal blocks, transfer relays, circuit breakers, and all other regularly used commercial items of electrical equipment not covered by FAA equipment specifications and ACs shall conform to the applicable rulings and standards of the Institute of Electrical and Electronic Engineers (IEEE) or the National Electrical Manufacturers Association (NEMA). When specified, test reports from a testing laboratory indicating that the equipment meets the specifications shall be supplied. In all cases, equipment shall be new and a first-grade product. This equipment shall be supplied in the quantities required for the specific project and shall incorporate the electrical and mechanical characteristics specified in the proposal and plans. Equipment selected and installed by the Contractor shall maintain the interrupting current rating of the existing systems or specified rating whichever is greater. Electrical equipment shall include but is not limited to the following:

a. ELECTRIC SERVICE (VAULT). The new electrical vault shall be provided with a 200 ampere 240/120 volt, single phase, three (3) wire service with new utility metering with main breaker installed on the exterior of the new vault building and located as directed by the local electric company and Project Engineer. The meter enclosure and main breaker shall conform to the serving utility standards and applicable Codes and Ordinances. The meter will be provided by the utility.

b. PANELBOARDS. Manufacturers shall be regularly engaged in manufacture of panelboards and enclosures of types, sizes, and ratings required, whose products have been in satisfactory use in similar products for not less than five (5) years.

Installers shall have at least three (3) years of successful installation experience on projects utilizing panelboards similar to those required for this project.

Codes and Standards:

- 1) Comply with applicable local code requirements of the Authority Having Jurisdiction and NEC Article 408 as applicable to installation and construction of electrical panelboards and enclosures.
- 2) Comply with applicable requirements of UL 67 "Electrical Panelboards" and UL's 50, 869, 486A, 486B, and 1053 pertaining to panelboards, accessories, and enclosures. Provide panelboard units which are UL listed and labeled.
- 3) Comply with NEMA Std Pub/No 250, "Enclosures for Electrical Equipment (1000 Volts Maximum)", Pub/No PB-1, "Panelboards", and Pub/No PB 1.1, "Instructions for Safe Installation, Operation, and Maintenance of Panelboards Rated 600 Volts and Less".

Federal Specification Compliance: Comply with FS W-P-115, "Power Distribution Panel", pertaining to panelboards and accessories.

Subject to compliance with requirements, provide panelboard products of one of the following (for each type and rating of panelboard and enclosure), or approved equivalent.

- 1) Square D
- 2) Siemens
- 3) General Electric

Except as otherwise indicated provide panelboards, enclosures, and ancillary components of types, sizes, and ratings indicated to comply with manufacturer's standard materials, with the design and construction in accordance with published product information, equip with proper number of unit panelboard devices as required for complete installation. Where types, sizes, and ratings are not indicated, comply with NEC, UL and established industry standards for those applications indicated.

Panel boards shall be provided with main lugs or main breakers and branch circuit breakers, according to the scheduled on the Drawings.

The general requirements for the panels are shown on the Drawings including mounting and gutters. Mount the panels 6'-6" up to top of roughing cabinets. Gutters shall not be less than 5". Breaker frame size is shown on the Drawings. Handle ties will not be permitted anywhere. Multi-pole breakers shall have common trip and one handle.

All breakers shall be trip-free, suitable for switching, and thermal magnetic. All breakers shall be bolted to bus type secured in place by holding bolt. "Space" means provisions for adding breakers. Breakers or busses shall contain terminations or tapings designed for these attachments. All points of contact between bus and sub-bus shall be of copper full silvered between all contact surfaces.

All breakers shall have an interrupting capacity of not less than 22,000 amperes at 240 volts AC (symmetrical RMS amperes) for 240/120 volt panel boards. Provide breakers that are rated for the available fault current.

Provide a typewritten tabulation indicating fixture outlets, devices, machines, or apparatus served by each breaker and their room location. This shall follow coding on the Drawings with breakers numbered from top to bottom. Mount tabulation inside the door in a frame for the purpose, with a transparent plastic cover. Panel door shall be "door-in-door" construction.

c. DISCONNECT (SAFETY) SWITCHES. Work specified in this section shall consist of furnishing and installing disconnect switches.

- 1) Disconnect switches shall be heavy duty type. The switches shall be quick-make, quick-break type that during normal operation of the switch, the operation of contacts shall not be capable of being restrained by the operating handle after the closing or opening action of the contacts has started. Provision for padlocking the switch in the "OFF" position with at least three locks shall be provided. Provide with grounding lug.
- 2) Switches shall have a dual cover interlock to prevent unauthorized opening of the switch door when the handle is in the "ON" position, and to prevent closing of the switch mechanism when the door is open. Means shall be provided to permit authorized personnel to release the interlock for inspection purposes. Fused switches shall utilize Class R fuse holders.
- 3) Switches shall be rated 2 pole, single-throw, 240 volts with ampere rating as shown on the Contract Drawings. The UL listed short-circuit rating of the switch shall be 200,000 rms symmetrical amperes when Class R or Class J fuses are used with the appropriate rejection scheme (where fuses are called for).
 - i. Enclosure shall be NEMA 1 enclosed where mounted inside vault area.
 - ii. The finish shall be gray baked enamel, electrodeposited on clean phosphatized steel.
 - iii. The switches shall conform to NEMA KS1 and UL 98.

d. WIRE CONNECTORS AND DEVICES. All wire joints for 600V or lower wiring shall be made with a pressure squeezed connector such as T & B Stakon and Ideal, or bolted clamp such as made by Dessert. Twist-on type wire nuts are also permitted for general lighting and receptacle circuits only and only in dry locations. Wherever only screw connector is available, install a conductor terminal like T & B Stakon spade or donut and designed for the application and compression set to the conductor.

Cover all joints made with non-insulated clamp devices with Scotch brand plastic electrical tape. Type #88 may be used at any joint and shall be used whenever the temperature of joint or the room is below 50°F. In the summer, or when temperature is above 60°F, new type #33 plus may be used. Triple wrap joints, each wrap having a 50% overlay.

Connectors for L-824 conductors are as noted in Specification L-108.

e. SECONDARY SERVICE. Electrical utility service for the airfield vault is new and includes all conduit, ducts, and wiring from the existing utility transformer to the new metering. The Contractor shall provide all required assistance to the utility.

f. FUSES. Provide a complete set of fuses for each fusible switch. Time-current characteristics curves of fuses serving motors or connected in series with circuit breakers or other circuit protective devices shall be coordinated for proper operation; submit coordination data for approval. Fuses shall have a voltage rating not less than the circuit voltage.

- 1) Cartridge Fuses, Current-limiting type (Class R): UL 198E, Class RK-1 time-delay type. Associated fuseholders shall be Class R only.

g. RACEWAYS. Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

- 1) Liquid-Tight Flexible Metal Conduit
- 2) Rigid Metal Conduit
- 3) Electrical Metallic Tubing (within vault only)

The extent of raceway work is indicated or required to provide a complete project.

Manufacturers shall be firms regularly engaged in manufacture of raceway systems of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.

Installers shall have at least 3 years of successful installation experience on projects with electrical raceway work similar to that required for this project.

Comply with applicable requirements of NEMA Standards Publications pertaining to raceways.

Comply with applicable requirements of UL safety standards pertaining to electrical raceway systems. Provide raceway products and components which have been UL-listed and labeled.

Comply with applicable requirements of NEC pertaining to construction and installation of raceway systems.

Provide metal conduit, tubing and fittings of types, grades, sizes and weights (wall thicknesses) for each service indicated. Where types and grades are not indicated, provide proper selection determined by Installer and approved by the Owner, to fulfill wiring requirements, and comply with applicable portions of NEC for raceways.

Provide rigid steel, zinc-coated, threaded type conforming to FS WW-C-581, ANSI C80.1 and UL 6. Zinc coating shall be fused to inside and outside walls.

Provide liquid-tight flexible metal conduit; constructed of single strip, flexible, continuous, interlocked, and double-wrapped steel; galvanized inside and outside; coat with liquid-tight jacket of flexible polyvinyl chloride (PVC).

Rigid metal conduit fittings shall be cast malleable iron, galvanized or cadmium plated, conforming to FS W-F-408.

- 1) Use Type 1 fittings for raintight connections.
- 2) Use Type 2 fittings for concrete tight connections.
- 3) Use Type 3 fittings for other miscellaneous connections.

Liquid-tight flexible metal conduit fittings shall be FS W-F-406, Type 1, Class 3, Style G. Provide cadmium plated, malleable iron fittings with compression type steel ferrule and neoprene gasket sealing rings, with insulated, or noninsulated throat

Provide conduit, tubing and duct accessories of types, sizes, and materials, complying with manufacturer's published product information, which mate and match conduit and tubing.

Provide galvanized cast-metal conduit bodies of types, shapes and sizes as required to fulfill job requirements and NEC requirements. Construct conduit bodies with threaded- conduit-entrance ends, removable covers, either cast or of galvanized steel, and corrosion-resistant screws.

Subject to compliance with requirements, provide conduit bodies of one of the following, or approved equivalent:

- 1) Killark Electric Mfg. Co.
- 2) O-Z/Gedney Div; General Signal Co.
- 3) Spring City Electrical Mfg. Co.

h. PULLBOXES. Pullboxes shall comply with UL 50, "Electrical Cabinets and Boxes", for boxes over 100 cubic inches volumes. Boxes shall have screwed or bolted on covers of material same as box and shall be of size and shape to suit application.

Pullboxes shall be appropriate gauge steel where indoors, or stainless steel where outdoors, with welded seams. Where necessary to provide a rigid assembly, construct with internal structural steel bracing.

i. NEW RUNWAY AND TAXIWAY REGULATORS. The Runway regulator shall be 5 kW, 240 volt, with 120 volt control power, primary switch and input and output lightning/surge arrestors and shall conform to requirements of FAA Specification L-829, and shall be new. The Regulator shall be as manufactured by Crouse-Hinds /Eaton, ADB or other approved equal, dry type, 60 hertz, powered from 240 volt utility service. It shall include 6.6 ampere, 3 step output, with digital display and front of unit mounted selector "Remote - Off - Level 1 - Level 2 - Level 3" or similar approved markings. Connect new regulator output wiring from the new series plug "S-1" cutout to the regulator. Provide new conduit for constant current input power wiring from vault power distribution. Connect new conduit and control wires for regulator controls.

The new Taxiway regulator shall be the same as the above new regulator except it shall be rated 7.5 KW.

Design Criteria. All new lighting vault constant current regulator equipment sizes have been calculated based on the following loads.

- 2 module or 1 module size 2, LED sign volt-amps with isolation transformer = 95 VA.
- 3 module size 2, LED sign volt-amps with isolation transformer = 100 VA.
- Runway LED edge light with isolation transformer = 21.5 VA
- Runway LED Threshold light with isolation transformer = 26.2 VA.
- Taxiway LED edge light with isolation transformer = 20.4 VA

The Contractor shall submit notice of any modifications in regulator loading for the materials he proposes, including any modifications that would change quantities from the design documents. This must be part of any shop drawing submittal for the regulators.

Requests for review of substitute items of material and equipment requiring different (greater) electrical power design loads will not be accepted by the Owner and Engineer from anyone other than the Contractor. If Contractor wishes to furnish or use a substitute item of material or equipment the

Contractor shall make written application to the Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as that specified. The application will state whether or not acceptance of the substitute for use in the Work will require a change in the Drawings or Specifications to adapt the design to the substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Owner and Engineer in evaluating the proposed substitute. The Owner or Engineer may require the Contractor to furnish at the Contractor's expense additional data about the proposed substitute. The Owner will be the final sole judge of acceptability, and no substitute will be ordered or installed without the Owner's prior written acceptance. The Owner may require the Contractor to furnish at the Contractor's expense a special performance guarantee or other surety with respect to any substitute. The Owner may designate the Engineer to carry out the above review.

The Contractor's written application shall include the following:

- 1) A statement that a clear superiority of the substitute item (over that specified) exists, supported by certified test results, performance data and other evidence to supplement the requirements of the General Conditions or
- 2) If no superiority is claimed, the application shall also state the monetary credit to the Owner which will be allowed if the substitute item is accepted.

In order to aid the Owner in determining the equality of a proposed substitution (when compared to the item actually specified), the Contractor shall arrange for the performance of any tests requested by the Owner. The nature, extent, tester and supervisions of such tests including engineering costs, shall be borne by the Contractor. Certified test results shall be mailed directly to the Owner for all tests requested.

The Owner will record time required by Owner and Owner's consultants in evaluating substitutions proposed by Contractor and in making changes in the Drawings or Specifications occasioned thereby. Whether or not Owner accepts a proposed substitute, Contractor shall reimburse Owner for the changes of Owner and Owner's consultants for evaluating any proposed substitute.

j. REGULATOR CONTROLS. Provide new FAA approved controls for the new regulator. Installation and connection of the new controls to the new regulator which shall result in the same operations as the present regulator provides. Provide all required conduits, wires, and wireway to provide a complete installation of all components.

k. REMOVALS. The Contractor shall carefully remove all discontinued equipment, controls, and disconnects from the existing vault and deliver to an Owner-designated location on the airfield. Any items the Owner indicates in writing are not to be retained by the Owner shall be legally and lawfully disposed of by the Contractor off airport property at no added cost to the Owner.

l. SCHEDULING EQUIPMENT CHANGEOVER. The contractor shall coordinate with Owner and Engineer the scheduling of changeover from existing vault and equipment to new vault and new equipment to ensure a smooth transition of power and control to the airfield lighting system.

The Contractor shall schedule power interruptions with the Owner and Engineer for each phase of the work. This may require the Contractor to have to work during other than normal working hours, on weekends and/or holidays. Any such required scheduling and associated cost is incidental to the project and shall be included in the Contractor's bid.

In addition to the foregoing, the Contractor must ensure that all systems are fully operational at the end of each work day. This may, and likely will, require installations of temporary wiring between the existing vault and new vault equipment during the project. Any such temporary installations are considered a part of the total project and shall be included in the Contractor's bid, as shall the removal of the temporary installations as they are no longer required. They shall be included in the Contractor's bid.

m. REGULATOR CONTROLS. Existing L-821 panel and all associated pilot radio control equipment shall be discontinued and replaced with new equipment in the new airfield vault by this project.

The new electrical vault shall receive a new L-854 radio, new L-821 panel and required RTU equipment to control the new T/W and new R/W constant current regulators at the vault and also with full capability to interface with future regulators (presently none are planned) for the new vault and interface to the new Runway 14 PAPI unit and the new REIL (2 units, 1 at each R/W end) shall be included in this project.

n. L-854 RADIO. Provide and install, wire and connect a new L-854 pilot control radio, antenna, and appurtenant components at the new airfield electrical vault. The new radio shall be a receiver that is a single-conversion superheterodyne design, operating at a normal radio frequency within the VHF band of 118 to 136 MHz. The sensitivity shall be adjustable from 1 to 30 microvolts as desired by the Owner, permitting a control range of 1 to 20 miles. The receiver shall be programmed to operate on any frequency in the specified VHF range. Decoding shall be solid-state digital circuitry, which shall be designed to sense the presence of three, five, or seven pulses within a five-second time period. The digital circuitry upon determining that any of these conditions exist shall affect proper output relay closures. The radio shall be provided with a suitable remote antenna, mast and mounting hardware for the antenna, and suitable cable and connections for antenna connection to the radio, and with suitable lightning arrestor for the antenna cable.

o. BACKBOARD. Provide backboard for mounting all wall mounted electrical equipment and for all electrical cabling. Backboards shall be a minimum of ¾" exterior grade plywood, firmly anchored to walls and with a paint finish in accordance with industry standards or as specified by the Owner or as directed by the Engineer.

p. PAPI. This project includes the provision and installation of new PAPI equipment at RW 14. This specification section includes all electrical controls and ancillary components to be installed at the new vault for this installation, including interface to the new L-821 controls.

q. REIL. This project includes the provision and installation of new REIL equipment at RW 14 and RW 32. This specification section includes all electrical controls and ancillary components to be installed at the new vault for these installations, including interface to new L-821 controls.

r. TRANSFORMERS.

- 1) Airfield Electric Vault: Provide step-up dry type transformers as shown on the Contract Drawings for each of the 2 new REIL circuits and the one (1) new PAPI circuit. Transformers shall be 240v to 480 v and shall be NEMA ST20 general purpose, dry type, air cooled, non-ventilated, 220 degree C insulation system with design for

temperature rise not to exceed 115 degrees C under full load, maximum ambient temperature 40 degrees C. Transformer capacity shall be 115% of nameplate KVA without exceeding insulation rating. Transformers shall be UL labeled and rated for indoor installation.

- 2) At REIL: provide step-down dry type transformers as shown on Contract Drawings for each of the 2 REIL circuits. Transformers shall be 480v to 120v or 240v (field connection to determine), Transformers shall be Class F insulation rated designed to operate at a maximum temperature rise of 115 degrees C. They shall be UL labeled and rated for outdoor installation, unventilated enclosure. Contract Drawings indicate NEMA 4 rated, if available.

s. CONTACTORS. Provide power contactors, NEMA 1 enclosed, for installation in airfield vault for control of power 2 REIL circuits. Contactors shall be 120 V control power, poles as indicated, with power circuit amperage ratings of 30 A. They shall be lighting contactors as manufactured by Allen Bradley, Square D, or Siemens, with maintained contact style H-O-A selector switches on covers. They shall be provided with surge suppressors across the coils.

t. STANDBY POWER. Provide conduits for installation of 200 Ampere rated, NEMA 4X manual transfer switch padlockable in either "ON" or in the "OFF" position. Switch shall be UL listed and labeled for use on NEC Article 702 power installation. Provide generator connection terminal box per detail on Contract Drawings, with conduit and wire to the transfer switch. provide conduit and wire from main service breaker to transfer switch and from transfer switch to power distribution panelboard. Portable standby generator is not part of this project. Arrange equipment within the vault to accommodate a future installation of an automatic transfer switch, disconnects, and other ancillary items so as to minimize future rework when equipment is installed.

u. MAIN SERVICE CIRCUIT BREAKER. Provide new 200 Ampere, 240 volt, 2 pole, enclosed main service breaker as part of the new utility meter enclosure with main breaker. Ground per all applicable codes and ordinances. The breaker shall have an interrupting rating in RMS symmetrical amperes at 240 volts that exceeds the available utility fault current. Provide documentation from the serving utility of the maximum available fault current at the upgraded pad transformer secondary terminals and provide a breaker that exceeds that rating. If unable to obtain the available fault current from the utility, the breaker provided shall have an AIC rating of not less than 65,000 amperes at 240 VAC.

v. SURGE PROTECTIVE DEVICE. Provide a new, separately enclosed surge protective device and install and connect to new main power distribution panelboard. Unit shall be approved equal to SurgeLogic by Square D or equivalent by ASCO. It shall be designed for use on 240/120 Volt, single phase, 60 Hz. power systems and shall have a UL suppression voltage rating (SVR) of 800 and a line to line of 800 with a maximum continuous operating voltage of 150 and shall be rated not less than 240 KA per phase surge capacity. It shall be Type 2 and shall include a built-in surge counter..

w. WIREWAY. Provide wireway in accordance with UL 870. Manufacture to JIC standards for Oiltight and Dusttight Lay-in Wireway, and to NMTBA standards for industrial Control Equipment.

Lengths and Fittings: Manufacture from 14-gauge steel, provide straight lengths with hinged covers with gasketing. Hold covers closed with external latches. Installation of knockouts in either lengths or fittings are to be avoided.

Provide wireway that is suitable for "lay-in" conductors and with joint hardware assembly with each piece.

Provide sheet metal parts with inhibiting phosphate coating and baked enamel finish.

109-3.18 WIRE. Wire (in conduit) rated up to 5,000 volts shall be per AC 150/5345-7, Specification for L-824 Underground Electrical Cables for Airport Lighting Circuits. For ratings up to 600 volts, moisture and heat resistant thermoplastic wire conforming to Commercial Item Description A-A-59544A Type THWN-2 shall be used. The wires shall be of the type, size, number of conductors, and voltage shown in the plans or in the proposal.

a. CONTROL CIRCUITS. Unless otherwise indicated on the plans, wire shall be not less than No. 12 American wire gauge (AWG) and shall be insulated for 600 volts. If telephone control cable is specified, No. 19 AWG telephone cable per ANSI/Insulated Cable Engineers Association (ICEA) S-85-625 specifications shall be used.

b. POWER CIRCUITS.

(1) 600 volts maximum – Wire shall be No. 6 AWG or larger and insulated for at least 600 volts.

(2) 3,000 volts maximum – Wire shall be No. 6 AWG or larger and insulated for at least 3,000 volts.

(3) Over 3,000 volts-Wire shall be No. 6 AWG or larger and insulated for at least the circuit voltage.

109-3.19 SHORT CIRCUIT / COORDINATION / DEVICE EVALUATION / ARC FLASH ANALYSIS. The Contractor shall, based upon the equipment provided, include as a part of the submittal process the electrical system “Short Circuit / Coordination / Device evaluation / Arc Flash Analysis”. The analysis shall be performed by the equipment manufacturer and submitted in a written report. The analysis shall be signed and sealed by a registered professional Engineer from the state in which the project is located. The analysis shall comply with NFPA-70E and IEEE 1584.

The analysis will include: one line diagrams, short circuit analysis, coordination analysis, equipment evaluation, arc flash analysis and arc flash labels containing at a minimum, equipment name, voltage/current rating, available incident energy and flash protection boundary.

The selected firms field service Engineer shall perform data gathering for analysis completion and device settings, perform device setting as recommended by the analysis and will furnish and install the arc flash labels. The components worst case incident energy will be considered the available arc flash energy at that specific point in the system. Submit three written copies and one electronic copy of the report.

Provide all arc flash labels in conformance with requirements of Codes and Ordinances and install same on all equipment requiring such labels.

CONSTRUCTION METHODS

CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING

109-4.1 GENERAL. The Contractor shall construct the transformer vault or prefabricated metal housing at the location indicated in the plans. Vault construction shall be reinforced concrete, concrete masonry, or brick wall as specified. The metal housing shall be prefabricated equipment enclosure to be supplied in the size specified. The mounting pad or floor details, installation methods, and equipment placement are shown in the plans. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program.

The Contractor shall clear, grade, and seed the area around the vault or metal housing for a minimum distance of 10 feet on all sides. The slope shall be not less than 1/2 inch per foot away from the vault or metal housing in all directions.

The vault shall provide adequate protection against weather elements, including rain, wind-driven dust, snow, ice and excessive heat. The vault shall have sufficient filtered ventilation, to assure that the interior room temperatures and conditions do not exceed the recommended limits of the electrical equipment to be installed in the vault. The Contractor is responsible for contacting the manufacturer of the equipment to be installed to obtain environmental limitations of the equipment to be installed. Refer to the electrical vault detail plan sheets for construction requirements. The prefabricated building shall include roof, walls and floor in accordance with the details and these specifications.

109-4.2 FOUNDATION AND WALLS.

a. REINFORCED CONCRETE CONSTRUCTION. The Contractor shall construct the foundation and walls per the details shown in the plans. Unless otherwise specified, internal ties shall be of the mechanical type so that when the forms are removed the ends of the ties shall be at least one inch beneath the concrete surface; the holes shall be plugged and finished to prevent discoloration. Reinforcing steel shall be placed, as shown in the drawings, and secured in position to prevent displacement during the concrete placement.

The external surfaces of the concrete shall be thoroughly worked during the placing operation to force all coarse aggregate from the surface. Thoroughly work the mortar against the forms to produce a smooth finish free from air pockets and honeycomb.

The surface film of all pointed surfaces shall be removed before setting occurs. As soon as the pointing has set sufficiently, the entire surface inside and outside of the vault shall be thoroughly wet with water and rubbed with a No. 16 carborundum stone, or equivalent quality abrasive, bringing the surface to a paste. All form marks and projections shall be removed. The surface produced shall be smooth and dense without pits or irregularities. The materials which have been ground into a paste during the rubbing process shall be spread or brushed uniformly over the entire surface (except the interior surfaces that are to be painted shall have all paste removed by washing before painting) and permitted to reset. Final exterior finish shall be obtained by rubbing with No. 30 carborundum stone, or an equivalent quality abrasive. The surface shall be rubbed until the entire surface is smooth and uniform in color.

b. BRICK AND CONCRETE CONSTRUCTION. When this type of construction is specified, the foundation shall be concrete conforming to the details shown in the plans. The outer edge of the foundation at the floor level shall be beveled 1-1/2 inches at 45 degrees. Brick walls shall be 8 inches thick, laid in running bond with every sixth course a header course. Brick shall be laid in cement mortar (one part masonry cement and 3 parts sand) with full mortar bed and shoved joints. All joints shall be completely filled with mortar, and facing brick shall be back-parged with mortar as work progresses. All joints shall be 3/8 inch thick, exterior joints tooled concave, and interior joints struck flush. Both interior and exterior brick surfaces shall be cleaned and nail holes, cracks and other defects filled with mortar. When specified, a nonfading mineral pigment mortar coloring shall be added to the mortar. Steel reinforcing bars, 3/8 inch in diameter and 12 inches long, shall be set vertically in the center of the brick wall on not more than 2 feet centers to project 2-1/2 inches into the concrete roof slab. Lintels for supporting the brickwork over doors, windows, and louvers shall consist of two 4 × 3 × 3/8 inch steel angles. Lintels shall be painted with one coat of corrosion-

inhibiting primer before installation, and all exposed parts shall be painted similar to doors and window sash after installation.

Window sills may be concrete poured in place or precast concrete as indicated in the plans. All exposed surfaces shall have a rubbed finish as specified under reinforced concrete construction. After completion, all interior and exterior faces of walls shall be scrubbed with a solution of muriatic acid and water in the proportions of not less than one part acid to 10 parts of water. All traces of efflorescence, loose mortar, and mortar stain shall be removed, and the walls washed down with clear water.

c. CONCRETE MASONRY CONSTRUCTION. When this type of construction is specified, the foundation shall be concrete conforming to the details shown in the plans. The concrete masonry units shall be standard sizes and shapes and shall conform to ASTM C90 and shall include the closures, jambs, and other shapes required by the construction as shown in the plans. Standard construction practice shall be followed for this type of work including mortar, joints, reinforcing steel for extensions into roof slab, etc. Plaster for interior walls, if specified, shall be Portland cement plaster.

109-4.3 ROOF. The roof shall be reinforced concrete as shown in the plans. Reinforcing steel shall be placed as shown in the drawing and secured in position to prevent displacement during the pouring of the concrete. The concrete shall be poured monolithically and shall be free of honeycombs and voids. The surface shall have a steel-troweled finish and shall be sloped as shown in the drawing. The underside of the roof slab shall be finished in the same manner as specified for walls.

One brush or mop coat of hot asphalt roof coating shall be applied to the top surface of the roof slab. The asphalt material shall be heated to within the range specified by the manufacturer and immediately applied to the roof. The finished coat shall be continuous over the roof surface and free from holidays and blisters. Smears and dribbles of asphalt on the roof edges and building walls shall be removed.

109-4.4 FLOOR. Construct building foundation in accordance with the details shown in the plans. The floor shall be reinforced concrete as shown in the drawings. When present, all sod, roots, refuse, and other perishable material shall be removed from the area under the floor to a depth of 8 inches (200 mm), unless a greater depth is specified in the invitation for bids. This area shall be backfilled with materials consisting of sand, cinders, gravel, or stone. Fill shall be placed in layers not to exceed 4 inches (100 mm) and shall be thoroughly compacted by tamping or rolling. A layer of building paper shall be placed over the fill prior to placing concrete. The floor surfaces shall have a steel-troweled finish. The floor shall be level unless a drain is specified, in which case the floor shall be pitched 1/4 inch (6 mm) per foot downward toward the drain. A 1/4-inch asphalt felt expansion joint shall be placed between floor and foundation walls. The floor shall be poured monolithically and shall be free of honeycombs and voids.

109-4.5 FLOOR DRAIN. If shown in the plans, a floor drain and dry well shall be installed in the center of the floor of the equipment room. The dry well shall be excavated 4 × 4 feet square and to a depth of 4 feet below the finished floor elevation and shall be backfilled to the elevation of the underside of the floor with gravel - which shall all pass a 2-inch (50 mm) mesh sieve and shall all be retained on a 1/4-inch (6.3 mm) mesh sieve. The gravel backfill shall be placed in 6 inch maximum layers, and the entire surface of each layer shall be tamped either with a mechanical tamper or with a hand tamper weighing not less than 25 pounds and having a face area of not more than 36 square inches

nor less than 16 square inches. The drain inlet shall be set flush in the concrete floor. The drain shall have a clear opening of not less than 8 inches in diameter.

109-4.6 CONDUITS IN FLOOR AND FOUNDATION. Conduits shall be installed in the floor and through the foundation walls per the details shown in the plans. All underground conduit shall be painted with an asphalt compound. Conduit shall be installed with a coupling or metal conduit adapter flush with the top of the floor. All incoming conduit shall be closed with a pipe plug to prevent the entrance of foreign material during construction. Space conduit entrances shall be left closed.

109-4.7 DOORS. Doors shall be metal-clad fireproof Class A (three (3) hour rated) doors conforming to requirements of the National Electrical Code (NEC) and local electrical codes. Panic bar exit hardware shall be installed per NEC requirements. Refer to the new electrical vault detail plan sheets for construction requirements.

109-4.8 PAINTING. The floor, ceiling, and inside walls of concrete construction shall first be given a hardening treatment, after which the Contractor shall apply two coats of paint as specified below, except that interior face brick walls need not be painted. The hardening treatment shall consist of applying two coats of either a commercial floor hardener or a solution made by dissolving 2 pounds of magnesium fluorosilicate or zinc sulfate crystals in one gallon (liter) of water. Each coat shall be allowed to dry at least 48 hours before the next application. After the second treating coat has dried, the surfaces shall be brushed clean of all crystals and thoroughly washed with clear water. Paint for walls and ceiling shall be a light gray color approved by the RPR. The floor paint shall be a medium gray color approved by the RPR. Before painting, the surfaces shall be dry and clean. The first coat shall be thinned by adding 2/3-quart of spar varnish and 1/3-quart of turpentine to each gallon of paint. The second coat shall be applied without thinning. All doors, lintels, and windows shall be cleaned to remove any rust or foreign material and shall be given one body and one finish coat of white paint. Bare metal surfaces shall be given a prime coat of corrosion-inhibiting primer prior to the body and finish coats.

109-4.9 LIGHTS AND SWITCHES. The Contractor shall furnish and install a minimum of two duplex convenience outlets in the vault room. Receptacles shall be rated 20 ampere, 250 volts, and shall be GFCI protected, specification grade. Where a control room is specified, at least two duplex outlets shall be installed.

Lighting shall be LED lamped and emergency lighting shall be included. Fixture schedules are included on the Contact Drawings for lighting. Associated switches shall be 20 ampere, 120/277 volt, specification grade.

INSTALLATION OF EQUIPMENT IN VAULT OR PREFABRICATED METAL HOUSING

109-5.1 GENERAL. The Contractor shall furnish, install, and connect all equipment, equipment accessories, conduit, cables, wires, buses, grounds, and support necessary to ensure a complete and operable electrical distribution center for the airport lighting system as specified herein and shown in the plans. When specified, an emergency power supply and transfer switch shall be provided and installed.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and local code agency having jurisdiction. All electrical work shall comply with the NEC and local code agency having jurisdiction including the separation of under 600V work from 5,000V work."

109-5.2 POWER SUPPLY EQUIPMENT. Transformers, regulators, booster transformers, and other power supply equipment items shall be furnished and installed at the location shown in the plans or as directed by the RPR. The power supply equipment shall be set on steel “H” sections, “I” beams, channels, or concrete blocks to provide a minimum space of 1-1/2 inch between the equipment and the floor. The equipment shall be placed so as not to obstruct the oil-sampling plugs of the oil-filled units; and name-plates shall, so far as possible, not be obscured.

If specified in the plans and specifications, equipment for an alternate power source or an emergency power generator shall be furnished and installed. The alternate power supply installation shall include all equipment, accessories, a manual transfer switch, generator connection terminal as detailed on Contract Drawings, and any ancillary conduit and wiring to accommodate connection of a portable standby generator. The Portable Standby Generator is NOT provided under this project.

109-5.3 SWITCHGEAR AND PANELS. Oil switches, fused cutouts, relays, transfer switches, panels, panel boards, transformers, and other similar items shall be furnished and installed at the location shown in the plans or as directed by the RPR. Wall or ceiling mounted items shall be attached to the wall or ceiling with galvanized bolts of not less than 3/8-inch diameter engaging metal expansion shields or anchors in masonry or concrete vaults.

109-5.4 DUCT AND CONDUIT. The Contractor shall furnish and install square-type exposed metallic ducts with hinged covers for the control and power circuits in the vault. These shall be mounted along the walls behind all floor-mounted equipment and immediately below all wall-mounted equipment. The hinged covers shall be placed to open from the front side with the hinges at the front bottom.

Wall brackets for square ducts shall be installed at all joints 2 feet or more apart with intermediate brackets as specified. Conduit shall be used between square ducts and equipment or between different items of equipment when the equipment is designed for conduit connection. When the equipment is not designed for conduit connection, conductors shall enter the square-type control duct through insulating bushings in the duct or on the conduit risers.

109-5.5 WIRING AND CONNECTIONS. The Contractor shall make all necessary electrical connections in the vault per the wiring diagrams furnished and as directed by the RPR. In wiring to the terminal blocks, the Contractor shall leave sufficient extra length on each control lead to make future changes in connections at the terminal block. This shall be accomplished by running each control lead the longest way around the box to the proper terminal. Leads shall be neatly laced in place.

109-5.6 MARKING AND LABELING. All equipment, control wires, terminal blocks, etc., shall be tagged, marked, or labeled as specified below:

a. WIRE IDENTIFICATION. The Contractor shall furnish and install self-sticking wire labels or identifying tags on all control wires at the point where they connect to the control equipment or to the terminal blocks. Wire labels, if used, shall be of the self-sticking preprinted type and of the manufacturer’s recommended size for the wire involved. Identification -markings designated in the plans shall be followed. Tags, if used, shall be of fiber not less than 3/4 inch in diameter and not less than 1/32 inch thick. Identification markings designated in the plans shall be stamped on tags by means of small tool dies. Each tag shall be securely tied to the proper wire by a nonmetallic cord.

b. LABELS. The Contractor shall stencil identifying labels on the cases of regulators, breakers, and distribution and control relay cases with white oil paint as designated by the RPR. The letters and numerals shall be not less than one inch in height and shall be of proportionate width. The

Contractor shall also mark the correct circuit designations per the wiring diagram on the terminal marking strips, which are a part of each terminal block.

METHOD OF MEASUREMENT

109-6.1 The quantity of vaults to be paid for under this item shall consist of the number of vaults constructed in place and accepted as a complete unit including furnishing and installing the new precast structure, foundation, ducts, conduits, spacers, regulators, transformers, electrical service, radio controller, lighting circuit panels, S-1 cutouts, series circuit monitor, panelboards, wireways, junction boxes, switches, relays, circuit breakers, making all connections, all miscellaneous hardware, fittings, utility coordination, installation of new utility service, and any other labor, work, equipment, materials, or incidental expenses necessary, all completed, tested, accepted, and ready for operation.

109-6.2 The quantity of prefabricated metal housings to be paid for under this item shall consist of the number of housings constructed in place and accepted as a complete unit.

109-6.3 The quantity of equipment to be paid for under this item shall consist of all equipment installed, connected and accepted as a complete unit ready for operation within an existing vault or prefabricated metal housing.

109-6.4 The only equipment and materials to be considered separately for payment are the ducts and cables leaving the vault in the "Home Run" duct banks. Any other conduits, ducts, or cables needed to construct a fully functional electrical vault, in accordance with these plans and specifications, shall be considered incidental to Item L-109-1.

BASIS OF PAYMENT

109-7.1 Payment will be made at the contract unit price for each completed and accepted vault or prefabricated metal housing equipment installation. This price shall be full compensation for removal and disposal of the existing airfield electrical vault, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item L-109-1	Precast Electrical Vault and Foundation – per Lump Sum
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-3	Specification for L-821, Panels for Remote Control of Airport Lighting
AC 150/5345-5	Circuit Selector Switch
AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits

AC 150/5345-10	Specification for Constant Current Regulators and Regulator Monitors
AC 150/5345-13	Specification for L-841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport Lighting Circuits
AC 150/5345-49	Specification L-854, Radio Control Equipment;
AC 150/5345-53	Airport Lighting Equipment Certification Program

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSI/ICEA S-85-625	Standard for Telecommunications Cable Aircore, Polyolefin Insulated, Copper Conductor Technical Requirements
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ASTM International (ASTM)

ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM C62	Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
ASTM C90	Standard Specification for Loadbearing Concrete Masonry Units
ASTM D2823	Standard Specification for Asphalt Roof Coatings, Asbestos Containing
ASTM D4479	Standard Specification for Asphalt Roof Coatings – Asbestos-Free

Commercial Item Description (CID)

A-A 59544	Cable and Wire, Electrical (Power, Fixed Installation) Institute of Electrical and Electronic Engineers (IEEE)
IEEE 1584	Guide for Performing Arc-Flash Hazard Calculations

Master Painter's Institute (MPI)

MPI Reference #9	Alkyd, Exterior, Gloss (MPI Gloss Level 6)
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Underwriters Laboratories (UL)

UL Standard 6	Electrical Rigid Metal Conduit – Steel
UL Standard 514B	Conduit, Tubing, and Cable Fittings
UL Standard 514C	Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 651	Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
UL Standard 651A	Type EB and A Rigid PVC Conduit and HDPE Conduit

National Fire Protection Association (NFPA)

NFPA-70	National Electrical Code (NEC)
NFPA-70E	Standard for Electrical Safety in the Workplace
NFPA-780	Standard for the Installation of Lightning Protection Systems

END OF ITEM L-109

ITEM L-110 AIRPORT UNDERGROUND ELECTRICAL DUCT BANKS AND CONDUITS**DESCRIPTION**

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits and removal of existing duct banks. It shall also include all turving trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

EQUIPMENT AND MATERIALS**110-2.1 GENERAL.**

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, that comply with these specifications, at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

110-2.2 STEEL CONDUIT. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be painted with a 10-mil thick coat of asphaltum sealer or shall have a factory-bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10 mils of asphaltum sealer. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer's written instructions. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth."

110-2.3 PLASTIC CONDUIT. Plastic conduit and fittings shall conform to the following requirements:

- UL 514B covers W-C-1094-Conduit fittings all types, classes 1 thru 3 and 6 thru 10.
- UL 514C covers W-C-1094- all types, Class 5 junction box and cover in plastic (PVC).
- UL 651 covers W-C-1094-Rigid PVC Conduit, types I and II, Class 4.
- UL 651A covers W-C-1094-Rigid PVC Conduit and high-density polyethylene (HDPE) Conduit type III and Class 4.

Underwriters Laboratories Standards UL-651 and Article 352 of the current National Electrical Code shall be one of the following, as shown on the plans:

a. Type I–Schedule 40 and Schedule 80 PVC suitable for underground use either direct-buried or encased in concrete.

b. Type II–Schedule 40 PVC suitable for either above ground or underground use.

c. Type III – Schedule 80 PVC suitable for either above ground or underground use either direct-buried or encased in concrete.

d. Type III –HDPE pipe, minimum standard dimensional ratio (SDR) 11, suitable for placement with directional boring under pavement.

The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.

110-2.4 SPLIT CONDUIT. Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

110-2.5 CONDUIT SPACERS. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high grade, high density polyethylene complete with interlocking cap and base pads. They shall be designed to accept No. 4 reinforcing bars installed vertically.

110-2.6 CONCRETE. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

110-2.7 PRECAST CONCRETE STRUCTURES. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program. Precast concrete structures shall conform to ASTM C478.

110-2.8 FLOWABLE BACKFILL. Flowable material used to back fill conduit and duct bank trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

110-2.9 DETECTABLE WARNING TAPE. Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable), 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 5 feet.

Unless otherwise shown on the plans, concrete encased duct banks shall be used when crossing under pavements expected to carry aircraft loads, such as runways, taxiways, taxilanes, ramps and aprons. When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches below the required conduit or duct bank depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) 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 (6.3 mm) sieve. The bedding material shall be tamped until firm. Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport's secured area where trespassing is prohibited are at least 18 inches below the finished grade. Conduits outside the Airport's secured area shall be installed so that the tops of the conduits are at least 24 inches below the finished grade per National Electric Code (NEC), Table 300.5.

When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

110-3.4 MARKERS. The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet square and 4 - 6 inches thick extending approximately one inch above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet along the cable or duct run, with an additional marker at each change of direction of cable or duct run.

The Contractor shall impress the word "DUCT" or "CONDUIT" on each marker slab. Impression of letters shall be done in a manner, approved by the RPR, for a neat, professional appearance. All

letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the RPR. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the RPR. The letters shall be 4 inches high and 3 inches wide with width of stroke 1/2 inch and 1/4 inch deep or as large as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

110-3.5 BACKFILLING FOR CONDUITS. For conduits, 8 inches of sand, soft earth, or other fine fill (loose measurement) shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted per Item P-152 except that material used for back fill shall be select material not larger than 4 inches in diameter.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.6 BACKFILLING FOR DUCT BANKS. After the concrete has cured, the remaining trench shall be backfilled and compacted per Item P-152 "Excavation and Embankment" except that the material used for backfill shall be select material not larger than 4 inches in diameter. In addition to the requirements of Item P-152, where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet of duct bank or one work period's construction, whichever is less.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.7 RESTORATION. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The restoration shall include topsoiling, fertilizing, and seeding shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. All restoration shall be considered incidental to the respective L-110 pay item. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

110-3.8 OWNERSHIP OF REMOVED CABLE. Any and all removed cable shall be legally disposed of off Airport property unless otherwise requested by the Owner. The disposal of all removed cables, including any labor, equipment, and/or disposal fees, is the sole responsibility of the Contractor and shall be considered incidental to the item generating the removed cable.

METHOD OF MEASUREMENT

110-4.1 Underground conduits and duct banks shall be measured by the linear feet of conduits and duct banks installed, including encasement, locator tape, counterpoise, trenching and backfill with designated material, and restoration, and for drain lines, the termination at the drainage structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.

BASIS OF PAYMENT

110-5.1 Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, and, for drain lines, the termination at the drainage structure. This price shall be full compensation for removal and disposal of existing duct banks and conduits as shown on the plans, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications.

Payment will be made under:

Item L-110-1	2" 1-Way Unencased Electrical Conduit – per Linear Foot
Item L-110-2	2" 2-Way Unencased Electrical Duct Bank – per Linear Foot
Item L-110-3	2" 2-Way Concrete Encased Electrical Duct Bank – per Linear Foot
Item L-110-4	4" 2-Way Unencased Electrical Duct Bank – per Linear Foot
Item L-110-5	4" 4-Way Unencased Electrical Duct Bank – per Linear Foot
Item L-110-6	4" 4-Way Concrete Encased Electrical Duct Bank – 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
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National Fire Protection Association (NFPA)

NFPA-70	National Electrical Code (NEC)
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Underwriters Laboratories (UL)

UL Standard 6	Electrical Rigid Metal Conduit - Steel
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UL Standard 514B	Conduit, Tubing, and Cable Fittings
UL Standard 514C	Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 1242	Electrical Intermediate Metal Conduit Steel
UL Standard 651	Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
UL Standard 651A	Type EB and A Rigid PVC Conduit and HDPE Conduit

END OF ITEM L-110

ITEM L-115 ELECTRICAL MANHOLES AND JUNCTION STRUCTURES

DESCRIPTION

115-1.1 This item shall consist of electrical manholes and junction structures (hand holes, pull boxes, junction cans, etc.) installed per this specification, at the indicated locations and conforming to the lines, grades and dimensions shown on the plans or as required by the RPR. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the RPR including removal of existing manholes and junction structures as shown on the plans.

EQUIPMENT AND MATERIALS

115-2.1 GENERAL.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when so requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

115-2.2 CONCRETE STRUCTURES. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. Cast-in-place concrete structures shall be as shown on the plans.

115-2.3 PRECAST CONCRETE STRUCTURES. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program. Provide precast concrete structures where shown on the plans.

Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand 30,000 lb. aircraft loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans.

Threaded inserts and pulling eyes shall be cast in as shown on the plans.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the RPR shall be submitted by the Contractor to allow for a full evaluation by the RPR. The RPR shall review per the process defined in the General Provisions.

115-2.4 JUNCTION BOXES. Junction boxes shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) airport light bases that are encased in concrete. The light bases shall have a L-894 blank cover, gasket, and stainless steel hardware. All bolts, studs, nuts, lock washers, and other similar fasteners used for the light fixture assemblies must be fabricated from 316L (equivalent to EN 1.4404), 18-8, 410, or 416 stainless steel. If 18-8, 410, or 416 stainless steel is utilized it shall be passivated and be free from any discoloration. Covers shall be 3/8-inch thickness for L-867 and 3/4-inch thickness for L-868. All junction boxes shall be provided with both internal and external ground lugs.

115-2.5 MORTAR. The mortar shall be composed of one part of cement and two parts of mortar sand, by volume. The cement shall be per the requirements in ASTM C150, Type I. The sand shall be per the requirements in ASTM C144. Hydrated lime may be added to the mixture of sand and cement in an amount not to exceed 15% of the weight of cement used. The hydrated lime shall meet the requirements of ASTM C206. Water shall be potable, reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

115-2.6 CONCRETE. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

115-2.7 FRAMES AND COVERS. The frames shall conform to one of the following requirements:

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| a. ASTM A48 | Gray iron castings |
| b. ASTM A47 | Malleable iron castings |
| c. ASTM A27 | Steel castings |
| d. ASTM A283, Grade D | Structural steel for grates and frames |
| e. ASTM A536 | Ductile iron castings |
| f. ASTM A897 | Austempered ductile iron castings |

All castings specified shall withstand a maximum tire pressure of 180 psi and maximum load of 30,000 lbs.

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word "ELECTRIC" or other approved designation cast on it. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a "DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

115-2.8 LADDERS. Ladders, if specified, shall be galvanized steel or as shown on the plans.

115-2.9 REINFORCING STEEL. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A615, Grade 60.

115-2.10 BEDDING/SPECIAL BACKFILL. Bedding or special backfill shall be as shown on the plans.

115-2.11 FLOWABLE BACKFILL. Flowable material used to backfill shall conform to the requirements of Item P-153, Controlled Low Strength Material.

115-2.12 CABLE TRAYS. Cable trays shall be of galvanized steel or plastic. Cable trays shall be located as shown on the plans.

115-2.13 PLASTIC CONDUIT. Plastic conduit shall comply with Item L-110, Airport Underground Electrical Duct Banks and Conduits.

115-2.14 CONDUIT TERMINATORS. Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

115-2.15 PULLING-IN IRONS. Pulling-in irons shall be manufactured with 7/8-inch diameter hot-dipped galvanized steel or stress-relieved carbon steel roping designed for concrete applications (7 strand, 1/2-inch diameter with an ultimate strength of 270,000 psi). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

115-2.16 GROUND RODS. Ground rods shall be one piece, copper or copper clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case shall they be less than 8 feet long nor less than 5/8 inch in diameter.

CONSTRUCTION METHODS

115-3.1 UNCLASSIFIED EXCAVATION. It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the RPR without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings to the lines and grades or elevations shown on the plans or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to Item L-115. Dewatering necessary for structure installation and erosion per federal, state, and local requirements is incidental to Item L-115.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the RPR. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the RPR. Structures shall be placed after the RPR has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 inches of sand or a material approved by the RPR as a suitable base to receive the structure. The base material shall be compacted and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the plans.

115-3.2 CONCRETE STRUCTURES. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

115-3.3 PRECAST UNIT INSTALLATIONS. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 PLACEMENT AND TREATMENT OF CASTINGS, FRAMES AND FITTINGS. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the RPR and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written approval is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper

assembly and fitting of parts shall be reported immediately to the RPR and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor's expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 INSTALLATION OF LADDERS. Ladders shall be installed such that they may be removed if necessary. Mounting brackets shall be supplied top and bottom and shall be cast in place during fabrication of the structure or drilled and grouted in place after erection of the structure.

115-3.6 REMOVAL OF SHEETING AND BRACING. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The RPR may direct the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 BACKFILLING. After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

Backfill shall not be placed against any structure until approval is given by the RPR. In the case of concrete, such approval shall not be given until tests made by the laboratory under supervision of the RPR establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

Where required, the RPR may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 CONNECTION OF DUCT BANKS. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

115-3.9 GROUNDING. A ground rod shall be installed in the floor of all concrete structures so that the top of rod extends 6 inches above the floor. The ground rod shall be installed within one foot (30 cm) of a corner of the concrete structure. Ground rods shall be installed prior to casting the bottom slab. Where the soil condition does not permit driving the ground rod into the earth without damage to the ground rod, the Contractor shall drill a 4-inch diameter hole into the earth to receive the ground rod. The hole around the ground rod shall be filled throughout its length, below slab, with Portland

cement grout. Ground rods shall be installed in precast bottom slab of structures by drilling a hole through bottom slab and installing the ground rod. Bottom slab penetration shall be sealed watertight with Portland cement grout around the ground rod.

A grounding bus of 4/0 bare stranded copper shall be exothermically bonded to the ground rod and loop the concrete structure walls. The ground bus shall be a minimum of one foot above the floor of the structure and separate from other cables. No. 2 American wire gauge (AWG) bare copper pigtailed shall bond the grounding bus to all cable trays and other metal hardware within the concrete structure. Connections to the grounding bus shall be exothermic. If an exothermic weld is not possible, connections to the grounding bus shall be made by using connectors approved for direct burial in soil or concrete per UL 467. Hardware connections may be mechanical, using a lug designed for that purpose.

115-3.10 CLEANUP AND REPAIR. After erection of all galvanized items, damaged areas shall be repaired by applying a liquid cold-galvanizing compound per MIL-P-21035. Surfaces shall be prepared and compound applied per the manufacturer's recommendations.

Prior to acceptance, the entire structure shall be cleaned of all dirt and debris.

115-3.11 RESTORATION. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. All sodding, grading and restoration shall be considered incidental to the respective Item L-115 pay item.

The Contractor shall grade around structures as required to provide positive drainage away from the structure.

Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials.

Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.12 INSPECTION. Prior to final approval, the electrical structures shall be thoroughly inspected for conformance with the plans and this specification. Any indication of defects in materials or workmanship shall be further investigated and corrected. The earth resistance to ground of each ground rod shall not exceed 25 ohms. Each ground rod shall be tested using the fall-of-potential ground impedance test per American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81. This test shall be performed prior to establishing connections to other ground electrodes.

115-3.13 MANHOLE ELEVATION ADJUSTMENTS. The Contractor shall adjust the tops of existing manholes in areas designated in the Contract Documents to the new elevations shown. The Contractor shall be responsible for determining the exact height adjustment required to raise or lower the top of each manhole to the new elevations. The existing top elevation of each manhole to be adjusted shall be determined in the field and subtracted/added from the proposed top elevation.

The Contractor shall remove/extend the existing top section or ring and cover on the manhole structure or manhole access. The Contractor shall install precast concrete sections or grade rings of the required dimensions to adjust the manhole top to the new proposed elevation or shall cut the existing manhole walls to shorten the existing structure, as required by final grades. The Contractor shall reinstall the manhole top section or ring and cover on top and check the new top elevation.

The Contractor shall construct a concrete slab around the top of adjusted structures located in graded areas that are not to be paved. The concrete slab shall conform to the dimensions shown on the plans.

115-3.14 DUCT EXTENSION TO EXISTING DUCTS. Where existing concrete encased ducts are to be extended, the duct extension shall be concrete encased plastic conduit. The fittings to connect the ducts together shall be standard manufactured connectors designed and approved for the purpose. The duct extensions shall be installed according to the concrete encased duct detail and as shown on the plans.

METHOD OF MEASUREMENT

115-4.1 Electrical manholes and junction structures shall be measured by each unit completed in place and accepted. The following items shall be included in the price of each unit: All required excavation and dewatering;; sheeting and bracing; all required backfilling with on-site materials; restoration of all surfaces and finished grading and turfing; all required connections; temporary cables and connections; and ground rod testing

115-4.2 Manhole elevation adjustments shall be measured by the completed unit installed, in place, completed, and accepted. Separate measurement shall not be made for the various types and sizes.

BASIS OF PAYMENT

115-5.1 The accepted quantity of electrical manholes and junction structures will be paid for at the Contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

115-5.2 Payment shall be made at the contract unit price for manhole elevation adjustments. 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, including but not limited to, spacers, concrete, rebar, dewatering, excavating, backfill, topsoil, sodding and pavement restoration, where required, to complete this item as shown in the plans and to the satisfaction of the RPR.

Payment will be made under:

Item L-115-1	Electrical Handhole - Per Each
Item L-115-2	Electrical Junction Can - Per Each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSI/IEEE STD 81	IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
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Advisory Circular (AC)

AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-53	Airport Lighting Equipment Certification Program

Commercial Item Description (CID)

A-A 59544	Cable and Wire, Electrical (Power, Fixed Installation)
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ASTM International (ASTM)

ASTM A27	Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47	Standard Specification for Ferritic Malleable Iron Castings
ASTM A48	Standard Specification for Gray Iron Castings
ASTM A123	Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products
ASTM A283	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536	Standard Specification for Ductile Iron Castings
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A897	Standard Specification for Austempered Ductile Iron Castings
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C206	Standard Specification for Finishing Hydrated Lime

FAA Engineering Brief (EB)

EB #83	In Pavement Light Fixture Bolts
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Mil Spec

MIL-P-21035

Paint High Zinc Dust Content, Galvanizing Repair

National Fire Protection Association (NFPA)

NFPA-70

National Electrical Code (NEC)

END OF ITEM L-115

ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS

DESCRIPTION

125-1.1 This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

125-2.1 GENERAL.

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not perform as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for to operate properly.

b. Manufacturer's certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

c. All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

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

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final

acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

EQUIPMENT AND MATERIALS

125-2.2 CONDUIT/DUCT. Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.

125-2.3 CABLE AND COUNTERPOISE. Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.

125-2.4 TAPE. Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.

125-2.5 CABLE CONNECTIONS. Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.

125-2.6 RETROREFLECTIVE MARKERS. Not required.

125-2.7 RUNWAY AND TAXIWAY LIGHTS. Runway and taxiway lights shall conform to the requirements of AC 150/5345-46. Lamps shall be of size and type indicated, or as required by fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors conforming to the specification for the light concerned or to the standard referenced.

Lights

Type	Class	Mode	Style	Option	Base	Filter	Transformer	Notes
L-861 Runway Edge (L)	1	2	-	4	Stake	21.5 VA	L-830	Bulbs shall be LED type; Fixture height shall be 24"
L-861 Runway Edge (L)	2	2	-	4	L-868 Base	21.5 VA	L-830	Bulbs shall be LED type; Fixture height shall be 24"
L-861SE Runway threshold (L)	1	2	-	4	L-868 Base	26.2 VA	L-830	Bulbs shall be LED type; Fixture height shall be 24"
L-861SE Runway threshold (L)	2	2	-	4	Stake	26.2 VA	L-830	Bulbs shall be LED type; Fixture height shall be 24"

Type	Class	Mode	Style	Option	Base	Filter	Transformer	Notes
L-861-T Taxiway Edge (L)	1	2	-	4	L-868 Base	20.4 VA	L-830	Bulbs shall be LED type; Fixture Height shall be 24"
L-861-T Taxiway Edge (L)	2	2	-	4	Stake	20.4 VA	L-830	Bulbs shall be LED type; Fixture Height shall be 24"

125-2.8 RUNWAY AND TAXIWAY SIGNS. Runway and Taxiway Guidance Signs should conform to the requirements of AC 150/5345-44.

Signs

Type	Size	Style	Class	Mode	Notes
L-858Y (L)	2	2	2	2	Direction, Destination, and Boundary Signs (LED)
L-858R (L)	2	2	2	2	Mandatory Instruction Signs (LED)
L-858L (L)	2	2	2	2	Location Signs (LED)

125-2.9 RUNWAY END IDENTIFIER LIGHT (REIL). The REIL fixtures shall meet the requirements of AC 150/5345-51, Type L-849 (L), Style E, voltage powered with current sensing option.

125-2.10 PRECISION APPROACH PATH INDICATOR (PAPI). The light units for the PAPI shall meet the requirements of AC 150/5345-28, Type L-880, Style A, Class II.

125-2.11 CIRCUIT SELECTOR CABINET. Not used.

125-2.12 LIGHT BASE AND TRANSFORMER HOUSINGS. Light Base and Transformer Housings should conform to the requirements of AC 150/5345-42. Light bases shall be Type L-868, Class 1A, Size B shall be provided as indicated or as required to accommodate the fixture or device installed thereon. Base plates, cover plates, and adapter plates shall be provided to accommodate various sizes of fixtures.

125-2.13 ISOLATION TRANSFORMERS. Isolation Transformers shall be Type L-830, size as required for each installation. Transformer shall conform to AC 150/5345-47.

INSTALLATION

125-3.1 INSTALLATION. The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

125-3.2 TESTING. All lights shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. The test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The fixtures shall illuminate properly during each portion of the test.

125-3.3 SHIPPING AND STORAGE. Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer's recommendations.

125-3.4 ELEVATED AND IN-PAVEMENT LIGHTS. Water, debris, and other foreign substances shall be removed prior to installing fixture base and light.

A jig or holding device shall be used when installing each light fixture to ensure positioning to the proper elevation, alignment, level control, and azimuth control. Light fixtures shall be oriented with the light beams parallel to the runway or taxiway centerline and facing in the required direction. The outermost edge of fixture shall be level with the surrounding pavement. Surplus sealant or flexible embedding material shall be removed. The holding device shall remain in place until sealant has reached its initial set.

METHOD OF MEASUREMENT

125-4.1 Runway and taxiway lights will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR. Guidance signs will be measured by the number of each type and size installed as completed units, in place, ready for operation, and accepted by the RPR. Runway End Identifier Lights shall be measured by each system installed as a completed unit in place, ready for operation, and accepted by the RPR.

Precision Approach Path Indicator shall be measured by each system installed as a completed unit, in place, ready for operation, and accepted by the RPR. Abbreviated Precision Approach Path Indicator shall be measured by each system installed as a completed unit, in place, ready for operation, and accepted by the RPR.

BASIS OF PAYMENT

125-5.1 Payment will be made at the Contract unit price for each complete runway or taxiway light, guidance sign, reflective marker, runway end identification light, precision approach path indicator, or abbreviated precision approach path indicator installed by the Contractor and accepted by the

RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

L-125-1	Runway Edge Light (Base Mounted) – per Each
L-125-2	Runway Edge Light (Stake Mounted) – per Each
L-125-3	Runway End Light (Base Mounted) – per Each
L-125-4	Runway Threshold Light (Base Mounted) – per Each
L-125-5	Taxiway Edge Light (Base Mounted) – per Each
L-125-6	Taxiway Edge Light (Stake Mounted) – per Each
L-125-7	Airfield Guidance Sign (1 Module) – per each
L-125-8	Airfield Guidance Sign (2 Module) – per each
L-125-9	Airfield Guidance Sign (3 Module) – per each
L-125-10	Remove and Reset Airfield Guidance Sign – per each
L-125-11	Runway End Identifier Lights (14 and 32 Ends) – per lump sum
L-125-12	Precision Approach Path Indicators (14 End) – per lump sum
L-125-13	Remove and Relocate Precision Approach Path Indicators (32 End) – per lump sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-18	Standards for Airport Sign Systems
AC 150/5340-26	Maintenance of Airport Visual Aid Facilities
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-5	Circuit Selector Switch
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 150/5345-28	Precision Approach Path Indicator (PAPI) Systems
AC 150/5345-39	Specification for L-853, Runway and Taxiway Retroreflective Markers
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
AC 150/5345-44	Specification for Runway and Taxiway Signs

AC 150/5345-47	Specification for Series to Series Isolation Transformers for Airport Lighting Systems
AC 150/5345-51	Specification for Discharge-Type Flashing Light Equipment
AC 150/5345-53	Airport Lighting Equipment Certification Program
Engineering Brief (EB)	
EB No. 67	Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures

END OF ITEM L-125