

**CITY OF PHOENIX, ARIZONA
OFFICE OF THE CITY ENGINEER
DESIGN AND CONSTRUCTION PROCUREMENT**



PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

AVIATION DEPARTMENT

**PHOENIX GOODYEAR AIRPORT
INFIELD PAVING PHASE II**

PROJECT NO. AV41000079 ADOT

AGREEMENT _____

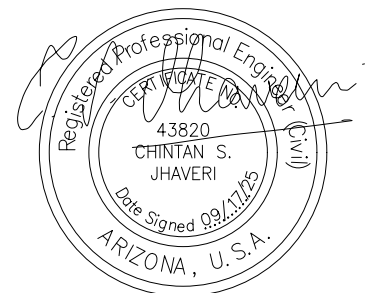


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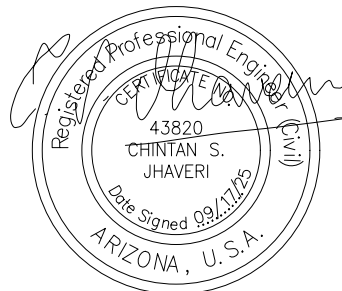
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CALL FOR BIDS

CITY OF PHOENIX

AVIATION DEPARTMENT

PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II

DESIGN-BID-BUILD

OPENGOV ID NO. AV41000079 ADOT

BIDS WILL BE DUE: TUESDAY, OCTOBER 14, 2025 AT 2:00 PM.

**SUBMITTED INTO THE DESIGN AND CONSTRUCTION PROCUREMENT BID BOX
LOCATED ON THE 1ST FLOOR LOBBY OF THE PHOENIX CITY HALL BUILDING,
200 W. WASHINGTON STREET, PHOENIX, ARIZONA, 85003**

**BIDS WILL BE READ: TUESDAY, OCTOBER 14, 2025 AT 2:00 PM.
ON 5TH FLOOR, ROOM 5 WEST PHOENIX CITY HALL 200 W. WASHINGTON STREET
PHOENIX, AZ 85003-1611**

***All times are local Phoenix time**

Scope of Work

The City of Phoenix is seeking a qualified contractor to provide construction services for the project listed below.

The project consists of the grading of infields between the runway and adjacent Taxiway A and paving over with two-inch thick asphalt. This phase covers seven infields between Taxiways A1 and A2, between Taxiways A4 and A5, between Taxiways A5 and A6, between Taxiways A6 and A7, between Taxiways A7 and A8, and between Taxiways A9 and A10. Scope of work shall include all grading and paving, adjustment to new grades of certain appurtenances within those infields including catch basins and inlets, some concrete storm drain piping, monitoring wells, electrical duct bank and conduits, and associated manholes, handholes, lights and signs.

The project site is located at the Phoenix Goodyear Airport, 1658 S. Litchfield Road, Goodyear, Arizona 85338.

This is a federal-aid project. The prevailing basic hourly wage rates and fringe benefit payments, as determined by the Secretary of Labor pursuant to the provisions of the Davis-Bacon Act, shall be the minimum wages paid to the described classes of laborers and mechanics employed or working on the site to perform the contract.

This project will utilize federal funds and is subject to the requirements of 49 Code of Federal Regulations Part 26 and the U.S. Department of Transportation DBE Program.

No DBE goal has been established for this project.

The City of Phoenix, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252.42 U.S.C. §§ 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Pre-Bid Meeting

A pre-bid meeting will be held at 1:00 pm on Thursday, September 25, 2025, at 500 S. 24th Street, Phoenix, AZ 85034, AVN Design and Construction Services Building, Diamondbacks Conference Room **AND** via Teams. At this meeting, staff will discuss the scope of work, general contract issues and respond to questions from the attendees. As City staff will not be available to respond to individual inquiries regarding the project scope outside of this pre-bid meeting, it is strongly recommended that interested firms send a representative to the pre-bid meeting.

Pre-Bid Teams Meeting Information:

Join from the meeting link

[Join the meeting now](#)

Join from meeting number

Meeting number (access code): 281 959 926 807 2

Meeting password: oK6xE2rp

Request For Bid Packet

On Thursday, September 18, 2025 the Invitation For Bids packet may be downloaded from the e-Procurement Portal at: <https://procurement.opengov.com/portal/phoenix>

Firms receiving a copy of the bid packet through any other means are strongly encouraged to download the bid packet from the City webpage.

Firms must be registered in e-Procurement <https://procurement.opengov.com/portal/phoenix> as a vendor.

General Information

The City reserves the right to award the contract to the lowest responsible responsive bidder or all bids will be rejected, as soon as practicable after the date of opening bids.

The City of Phoenix will provide reasonable accommodations for alternate formats of the bid packet by calling Annette Perez at (602) 273-3488 or calling TTY 711. Requests will only be honored if made within the first week of the advertising period. Please allow a minimum of seven calendar days for production.

Questions pertaining to process or contract issues should be submitted via the e-Procurement portal.

Jeffrey Barton
City Manager

Eric J. Froberg, PE
City Engineer

Published: Arizona Business Gazette
Date: September 18, 2025
Date: September 25, 2025
District: Out of City

INFORMATION FOR BIDDERS

1. QUESTIONS ON PLANS AND SPECIFICATIONS

Neither the Engineer nor the City of Phoenix will be held responsible for any oral instructions. Any changes to the plans and specifications will be in the form of an addendum. All addenda will be posted online within the project folder at the following website:

<https://procurement.opengov.com/portal.phoenix>

For additional information prior to submitting your bid, contact:

Plans, Technical/Special Provisions, Proposal or Specifications:

NAME: Annette Perez, Design and Construction Procurement

ADDRESS: 200 W. Washington Street, 6th Floor, Phoenix, AZ 85003-1611

PHONE: (602) 602-273-3488 E-MAIL: annette.perez@phoenix.gov

Federal Labor Standards/Davis-Bacon and related Acts contact:

Labor Compliance Office: (602) 261-8287

DBE Utilization contact:

Equal Opportunity Department: (602) 262-6790

All questions regarding the plans and specifications must be received (in writing) at a minimum seven calendar days prior to bid opening. Questions received after that time may not be given any consideration.

2. REQUEST FOR SUBSTITUTIONS

Paragraph A, B, and C of MAG Section 106.4 are deleted and the following paragraphs substituted:

- A. The Engineer will consider written request(s), by a prime bidder only, for substitution(s) which is/are considered equivalent to the item(s) specified in the Contract documents. The written request will be considered only if it is received at least twelve calendar days prior to the established bid date. Notification of acceptable substitutions will be made by addendum issued no fewer than seven calendar days prior to the established bid date. (A.R.S. 34-104)
- B. The prime bidder, at his own expense, will furnish the necessary data of substitution and validate that the physical, chemical, and operational qualities of each substitute item is such that this item will fulfill the originally specified required function.
- C. The substitution, if approved, will be authorized by a written addendum to the Contract documents and will be made available to all bidders. The bid date and the scheduled completion time will not be affected by any circumstances developing from this substitution.
- D. The request will be submitted to Design and Construction Procurement, Attention Annette Perez, 6th floor, Phoenix City Hall, 200 W. Washington Street, Phoenix, Arizona 85003-1611 or via email to annette.perez@phoenix.gov.

3. BID BOND

Bidders must submit a properly completed proposal guarantee in the form of certified check, cashier's check or on the surety bond provided, for an amount not less than ten percent of the total bid amount included in the proposal as a guarantee that the contractor will enter into a contract to

perform the proposal in accordance with the plans and specifications. Surety bonds submitted for this project will be provided by a company which has been rated "A- or better for the prior four quarters" by the A.M. Best Company. ***A bid will be deemed non-responsive if not accompanied by this guarantee.***

The surety bond will be executed solely by a surety company or companies holding a certificate of authority to transact surety business in the State of Arizona, issued by the Director of the Department of Insurance pursuant to Title 20, Chapter 2, Article 1. The surety bond will not be executed by an individual surety or sureties even if the requirements of Section 7-101 are satisfied. The certified check, cashiers check, or surety bond will be returned to the contractors whose proposals are not accepted, and to the successful contractor upon the execution of a satisfactory bond and contract.

When providing a Surety Bond, ***failure to provide an "A- or better for the prior four quarters" bond will result in bid rejection.***

4. **LIST OF MAJOR SUBCONTRACTORS AND SUPPLIERS & LIST OF ALL SUBCONTRACTORS AND SUPPLIERS**

A bid will be deemed non-responsive if not accompanied by a properly completed and signed L.O.S.-1 "List of Major Subcontractors and Suppliers" form.

To assist in eliminating the practice of bid shopping on City construction projects, the Bidder shall list all Major Subcontractors and Suppliers to whom the Bidder intends to contract with that are equal to or greater than 5% of the base bid. The list of Major Subcontractors and Suppliers will be provided on the L.O.S.-1 "List of Major Subcontractors" form. Failure to properly complete and sign this form will result in bid rejection. This form is due with the bid.

If substantial evidence exists that bid shopping occurred on this project, the Bidder will be ineligible to bid on City or City-affiliated construction projects for a period of one year.

The list of All Subcontractors and Suppliers shall be provided on the L.O.S.-2 "List of All Subcontractors and Suppliers" form. This form is due five calendar days after bid opening by 5:00 p.m. All bidders will be required to submit the L.O.S.-1 form. The three lowest bidders will be required to submit the L.O.S.-2 form. If the L.O.S.-2 form is not submitted by the post-bid deadline, the Bidder will still be required to submit the document prior to award. If the Bidder fails to submit the required L.O.S.-2 form by the post-bid deadline, the Bidder's bid bond may be placed in jeopardy because the City may make a claim against the Bidder's bid bond for the cost difference between the lowest responsive and responsible Bidder's bid and the next lowest bid (and any additional costs involved in awarding the contract to the next lowest responsive and responsible bidder).

5. **BID SUBMITTAL**

The properly completed bid documents along with the ten percent bid guarantee will be submitted in a sealed envelope. The outside of the envelope will be marked as follows:

Bid of (Firm's Name, Address, and Phone Number) _____

For: Phoenix Goodyear Airport Infield Paving Phase II Design-Bid-Build

City of Phoenix Project Number: AV41000079 ADOT

Sealed bids will be submitted to City Hall Building, 200 W. Washington Street, First Floor, Phoenix, AZ 85003, prior to the time and date specified for bid opening.

6. **BID WITHDRAWALS**

MAG Section 102-10, Withdrawal or Revision of Proposal, is hereby deleted and the following paragraph is substituted:

"No bidder may withdraw or revise a proposal after it has been deposited with the City, except as provided in Phoenix City Code Chapter 2, Section 188. Proposals, read or unread, will not be returned to the bidders until after determination of award has been made.

7. **ADDENDA**

Acknowledge all addenda; a bid will be deemed non-responsive if all issued addenda for this project are not acknowledged in writing on Page P. -1.

The City of Phoenix will not be responsible for any oral responses or instructions made by any employees or officers of the City of Phoenix in regard to the bidding instructions, plans, drawings, specifications, or contract documents. A verbal reply to an inquiry does not constitute a modification of the Invitation for Bid (IFB). Any changes to the plans, drawings and specifications will be in the form of an addendum.

It will be the responsibility of the prospective bidder to determine, prior to the submittal of its bid, if any addenda to the project have been issued by Design and Construction Procurement. All addenda issued, will be acknowledged by bidder on Page P.-1. All addenda (if any) will be available online within each project's folder at the following website:

<https://procurement.opengov.com/portal.phoenix>

The contractors and/or consultants are responsible for ensuring they have all addenda and/or notifications for all projects they are submitting on. Prospective bidders are strongly encouraged to check the Solicitations website in order to ascertain if any addenda have been issued for this project.

8. **BID SUBMITTAL CHECK LIST**

All firms must be registered in the City's Vendor Management System prior to submitting a proposal. For new firms – the City will send an email to your firm with a vendor number within two days of submitting the request. The vendor number needs to be included on the cover of the bid proposal package/envelope. Information on how to register with the City is available at:

<https://www.phoenix.gov/finance/vendorsreg>

BID SUBMITTAL CHECKLIST

This checklist is provided to remind bidders of several of the required elements of the bid packages. It is not intended to be a comprehensive list of all of the contract documents. Bidders are encouraged to review all of the Bid Instructions to determine compliance therein.

- ☐ Acknowledge all addenda? (Page P.-1)
- ☐ Complete all the Bid Proposal forms? (Page P.-1 to P.-4 and P.S.-1)
- ☐ Include your Bid Bond (rated A- or better for the prior four quarters) or Guarantee Cashier's Check? (Page S.B.-1)
- ☐ Include the Buy American Requirement Certification form, Attachment 1? (AIP Pages 34-39)
- ☐ Include the Certification Regarding Lobbying and Influencing Federal Employees form,

Attachment 2? (AIP Pages 40-41)

- ☐ Include the Rights in Data and Rights in Inventions Certification form, Attachment 3? (AIP Pages 42-43)
- ☐ Include the Rights Trade Restriction Clause form, Attachment 4? (AIP Pages 44-45)
- ☐ Include the Certification on Previous Contracts Subject to Equal Opportunity Clause, Attachment 5 (AIP Page 46)
- ☐ Include the Certification of Non-Segregated Facilities Certification form, Attachment 6? (AIP Pages 47-48)
- ☐ Include the Tax Delinquency and Felony Convictions, Attachment 7? (AIP Pages 49-50)
- ☐ Include the Certification Regarding Debarment, Suspension, Proposed Debarment and Other Responsibility Matters form, Attachment 8? (AIP Pages 51-52)
- ☐ Include the Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment, Attachment 9? (AIP Page 53)
- ☐ Documentation of Disadvantaged Business Enterprise (DBE) Program Statement of Outreach Commitment, (Form E.O.1)
- ☐ Documentation of Small Business Outreach Efforts, Columns A through D – (Form E.O.2); Form E.O.2 instructions are found on pages DBEC-4 to 6
- ☐ Include the complete List of Major Subcontractors and Suppliers form? (Page L.O.S.-1)

PLEASE DO NOT SUBMIT THE ENTIRE SPECIFICATION BOOK WHEN SUBMITTING YOUR BID. INCLUDE ONLY THE REQUIRED BIDDING DOCUMENTS

POST-BID SUBMITTAL CHECKLIST

The three lowest bidders must submit completed contracts documents listed below, no later than five calendar days after bid opening by 4:00 p.m. The documents must be submitted to Design and Construction Procurement, 6th Floor, or can be sent by email to annette.perez@phoenix.gov.

- ☐ Submit completed List of **All** Subcontractors and Suppliers form (L.O.S.-2)
- ☐ Completed Documentation of Small Business Outreach Efforts with supporting documentation – Columns E and F (Form E.O.2) – Form E.O.2 instructions and supporting documentation requirements are found on pages DBEC-4 to 6
- ☐ Completed Small Business Utilization Commitment (Form E.O.3)
- ☐ Provide Certificate on Previous Contracts Subject to Equal Opportunity Clause form, Attachment 6 (AIP Page 54)
- ☐ Submit Bidders Disclosure Statement? (Page B.D.S.-1 to B.D.S.-4)
- ☐ Submit Affidavit of Identity (A.O.I.-1) if you are a sole proprietor

PRIOR TO CONTRACT EXECUTION

- ☐ Contractor must provide proof of license required to perform the work.

- ❑ Verification of Experience Modification Rate (EMR) – the awarded company will be required to provide an EMR verification letter from the insurance company prior to contract execution.

9. **PERMITS**

CITY RESPONSIBILITY – The City will be responsible for City of Phoenix review and permit(s) fees for building and demolition permits. The City will also pay review fees for grading and drainage, water, sewer, and landscaping. The City will also pay for utility design fees for permanent services.

CONTRACTOR RESPONSIBILITY – The Contractor will be responsible for all other permits and review fees not specifically listed above. The Contractor is responsible for the cost of water meters, water and sewer taps, fire lines and taps, and all water bills on the project meters until the project is accepted. Arrangements for construction water are the Contractor's responsibility.

The Contractor may elect to use a City fire hydrant for its source of construction water only if an existing water service connection is unavailable or inadequate. The Contractor will be required to comply with Phoenix City Code Section 37-13A.

The Contractor is specifically reminded of the need to obtain the necessary environmental permits or file the necessary environmental notices. Copies of these permits and notices must be provided to the City's Project Manager prior to starting the permitted activity. In the case of Fire Department permits, a copy of the application for permit will also be provided to the Project Manager. This provision does not constitute an assumption by the City of an obligation of any kind for violation of said permit or notice requirements.

10. **CONTRACT AWARD**

Contract award will be made to the responsive and responsible bidder based on the low total base bid. If unit pricing is required in the proposal, the extensions and additions will be verified to assure correctness. Award will be based on the revised total if any errors are found. Additionally, the Contractor will comply with the DBE requirements as detailed in the DBE Clause. The City expressly reserves the right to cancel this agreement without recourse or prejudice to Contractor until all parties have executed the agreement in full.

Any bidder that currently contracts with the City must be in good standing for its proposal to be considered responsive. For the purpose of this Invitation to Bid, good standing means compliance with all contractual provisions, including payment of financial obligations.

11. **CANCELLATION OF CONTRACT FOR CONFLICT OF INTEREST**

All parties hereto acknowledge that this Agreement is subject to cancellation by the City of Phoenix pursuant to the provisions of Section 38-511, Arizona Revised Statutes.

12. **TERMINATION FOR CONVENIENCE**

The Owner for its own convenience has the right for any reason and at any time to terminate the contract and require the Contractor to cease work hereunder. Such termination will be effective at the time and in the manner specified in the notification to the Contractor of the termination. Such termination will be without prejudice to any claims which the Owner may have against the Contractor. In the event of a termination for convenience, the Contractor will be paid only the direct value of its completed work and materials supplied as of the date of termination, and Contractor will not be entitled to anticipated profit or anticipated overhead or any other claimed damages from the Owner, Architect or the Engineer. If the City is found to have improperly terminated the Agreement

for cause or default, the termination will be converted to a termination for convenience in accordance with the provisions of this Agreement.

13. **SURVEY**

The Contractor will set the construction stakes establishing lines, grades, and elevations to include necessary utilities and appurtenances and will be responsible for their conformance with plans and specifications. All construction survey is incidental to the Contractor's bid proposal. Construction staking will be done in accordance with the applicable provisions of the Public Works Design and Construction Management Division's "Standard Requirements for Staking, As-Builts, and Quantity Calculations", dated January 1, 1980. The Engineer will establish or designate a control line and benchmark of known location and elevation for use as a reference.

The Contractor will furnish the Engineer a certified set of calculations and measurements to fully support the derivation of all pay quantities. This information will be prepared by a registrant of the Arizona State Board of Technical Registration.

The Contractor will furnish the Engineer a set of "Record Drawings". Record drawings will be certified by a registrant of the Arizona State Board of Technical Registration.

14. **RECORD DRAWINGS**

The Contractor will maintain a record set of plans at the job site. These will be kept legible and current and will show all changes or work added in a contrasting, reproducible color. When the project is substantially complete, the Contractor will submit these plans to the Engineer for approval. When landscaping is included, the Contractor will submit, prior to final inspection, corrected landscape drawings showing the location of all utility services, controller, pipe, valves, and wiring. The Engineer will be the sole judge as to the acceptability of the record plans and receipt of an acceptable set is a pre-requisite for final payment.

15. **TESTINGS**

Soils backfill, pad, welding, roofing should be included in the contractor's proposal/price. Copies of all testing needed to be simultaneous sent via email or messenger to the developer.

16. **PRECONSTRUCTION CONFERENCE**

After the Contract documents are successfully completed, to include bonds, insurance, and signatures, and prior to the commencement of any work on the project, the Project Manager, will schedule a Pre-Construction Conference.

The purpose of this conference is to establish a working relationship between the Contractor, utility firms, and various City agencies. The agenda will include critical elements of the work schedule, submittal schedule, cost breakdown of major lump sum items, payment application and processing, coordination with the involved utility firms, emergency telephone numbers for all representatives involved in the course of construction, and establishment of the notice to proceed date.

Minimum attendance by the Contractor will be a responsible company/corporate official, who is authorized to execute and sign documents on behalf of the firm, the job superintendent, and the Contractor's safety officer.

17. **IMMIGRATION REFORM AND CONTROL ACT**

Compliance with Federal Laws Required. Contractor understands and acknowledges the applicability of the Immigration Reform and control Act of 1986 and the Drug Free Workplace Act to

him. Contractor agrees to comply with these Federal Laws in performing under this Agreement and to permit City inspection of his personnel records to verify such compliance.

18. **LEGAL WORKER REQUIREMENTS**

The City of Phoenix is prohibited by A.R.S. § 41-4401 from awarding a contract to any Contractor who fails, or whose subcontractors fail, to comply with A.R.S. § 23-214(A). Therefore, Contractor agrees that:

- A. Contractor and each subcontractor it uses warrants their compliance with all federal immigration laws and regulations that relate to their employees and their compliance with § 23-214, subsection A.
- B. A breach of a warranty under paragraph A will be deemed a material breach of the contract that is subject to penalties up to and including termination of the contract.
- C. The City of Phoenix retains the legal right to inspect the papers of any Contractor or subcontractor employee who works on the contract to ensure that the Contractor or subcontractor is complying with the warranty under paragraph A.

19. **CONTRACT WORKER BACKGROUND SCREENING**

Contractor agrees that all Contract Workers that Contractor allows to perform work under this Contract shall be subject to background and security checks and screening (Background Screening). Contractor must pay for the cost of all Background Screenings, unless otherwise provided in the Scope of Work. Contractor agrees that Background Screenings required by this Section is necessary to preserve and protect public health, safety, and welfare. The Background Screening requirements set forth in this Section are the minimum requirements for this Contract. The City does not warrant or represent that the minimum requirements are sufficient to protect Contractor from any liability that may arise out of Contractor's work under this Contract or Contractor's failure to comply with this Section. Therefore, in addition to the Background Screening measures set forth below, Contractor and its Contract Workers shall take such other reasonable, prudent, and necessary measures to further preserve and protect public health, safety, and welfare when providing work under this Contract.

As used in this Section, "Contract Worker" means a person performing work for the City, including (1) a person or entity that has a contract with the City, (2) a worker of a person or entity that has a contract with the City, (3) a worker of a subcontractor of a person or entity that has a contract with the City, and (4) a worker of a tenant of the City. (City of Phoenix A.R. 4.45)

Legal Worker Background Check

Pursuant to Arizona Revised Statutes (A.R.S.) § 41-4401, Contractor must verify the legal Arizona worker status of each Contract Worker. Contractor must conduct and all Contract Workers must pass a background check for their real identity and legal name prior to performing any work under this Contract.

City Rights Regarding Security Inquiries

In addition to a Legal Worker Background Check, the City reserves the right to require Contractor to:

- Have a Contract Worker provide fingerprints and execute any document that is necessary to obtain criminal justice information pursuant to A.R.S. § 41-1750(G)(4) or Phoenix City Code § 4-22 or both;
- Act on newly acquired information, whether or not the information should have been previously discovered;

- Unilaterally change its standards and criteria related to the acceptability of Contract Workers; and
- Object, at any time and for any reason, to a Contract Worker performing work under this Contract, including supervision and oversight services.

Contractor Certification

By entering into this Contract, Contractor certifies that Contractor has read the Background Screening requirements and criteria in this Section, understands them, and that all Background Screening information furnished to the City is accurate, complete, and current. A Contract Worker that is rejected for work under this Contract shall not perform any work under any other contract or engagement Contractor has with the City without the City's prior written approval.

Contractor's Contracts and Subcontracts

Contractor shall include the terms of this Section for Contract Worker Background Screening in all contracts and subcontracts for work performed under this Contract, including supervision and oversight services.

Materiality of Background Screening Requirements and Indemnity

The Background Screening requirements of this Section are material to the City's decision to enter into this Contract. Any breach of this Section by Contractor shall be deemed a material breach of this Contract. In addition to any other indemnification provision in this Contract, Contractor shall defend, indemnify, and hold harmless the City from and against any and all claims, actions, liabilities, damages, losses, and expenses (Claims) arising out of this Background Screening Section, including the Contractor's disqualification of any Contract Worker or the City's failure to enforce this Section.

Continuing Duty and Audit

Contractor's obligation to ensure that all Contract Workers pass a Background Screening pursuant to Section shall continue throughout the entire term of this Contract. Contractor shall immediately notify the City of any change to a Contract Worker's Background Screening. Contractor shall maintain all records and documents related to all Background Screenings and the City reserves the right to audit Contractor's compliance with this Section.

20. **CONTRACT WORKER ACCESS CONTROLS AND AIRPORT SECURITY BADGE REQUIREMENTS**

Contractor shall not allow a Contract Worker to begin work under this Contract until Contractor has completed the Background Screening required by the City and the City has issued the appropriate airport security badge to the Contract Worker. The airport security badge will grant the Contract Worker unescorted access authority only to the area or areas of the Airport that the Contract Worker must enter in order to perform work under this Contract. When a Contract Worker's work in any area ends, the Contract Worker's access authority to that area ends. Any Contract Worker that attempts to enter a restricted area or sterile area, as those terms are defined below, of the Airport without proper authority is an immediate breach of this Contract.

SECURITY IDENTIFICATION DISPLAY AREA (SIDA) BADGE PROCESS

Each Contract Worker that needs unescorted access authority to a restricted or sterile area of the Airport in order to perform work under this Contract must receive a security identification display area (SIDA) badge from the Aviation Department's Public Safety and Security Division's Badging Office. Contractor must make arrangements with the City to have each Contract Worker proceed to the Badging Office for processing. The Badging Office will not issue a SIDA badge until the Contract Worker passes a fingerprint-based criminal history background check (CHRC) required by federal law (49 C.F.R. § 1542.209) and § 4-22(C) of the Phoenix City Code and passes a security threat assessment as mandated by the TSA through a security directive (49 C.F.R. § 1542.303).

The Contract Worker shall comply with all requirements of and furnish all information requested by the Badging Office. Contractor shall pay for all fees associated with SIDA badging process, unless otherwise provided in the Scope of Work. Fees will be assessed according to § 4-22(D) of the Phoenix City Code. Current badging procedures and fees are available for review at <https://www.skyharbor.com/security/BadgingInformation>.

As used in this Section, "restricted area" means the secured area and SIDA area of the Airport. "Secured area" means the part of the Airport in which certain federal security measures are implemented and where airlines enplane and deplane passengers and load baggage. "SIDA area" means the secured area and other areas designated by the Aviation Department, which include air operation areas, ground transportation areas, and the Rental Car Center security doors. "Sterile area" means the part of the Airport that provides passengers access to board aircraft and is controlled by the TSA or the airline by screening of persons and property. See § 4-22 of the Phoenix City Code and Rules 05-01 and 05-09 of the Aviation Department Rules and Regulations for a complete definition of the foregoing terms

21. **RISK-BASED BACKGROUND CHECK PROCESS**

The City has established two levels of risk for Contract Worker background checks: standard risk and maximum risk. If the Scope of Work changes, the City may change the level of risk, which may require Contractor conduct additional investigations and incur additional costs in order to process a background check and obtain the required airport security badge. Contract Workers who receive a SIDA badge are exempt from a standard and maximum risk background check.

A STANDARD RISK BACKGROUND CHECK is required for all non-exempt Contract Workers performing work under this Contract.

As used in this Section, "background check" means the fact-gathering process described in City of Phoenix A.R. 4.45 that is conducted to obtain information regarding a Contract Worker's legal Arizona eligibility, criminal history, driving history, certifications, and other matters that may affect the Contract Worker's ability or fitness to perform work under this Contract.

Before any work is performed under this Contract, Contractor shall provide the City with a list of its Contract Workers.

If any dispute arises related to a background check process or criminal history check information, then Contractor and the affected Contract Worker will resolve the dispute. The City will not get involved in resolving any such dispute.

In making the determination whether information in a background check renders the Contract Worker disqualified, Contractor should be guided by the following principles and guidelines

- A. Disqualification should not be based solely on a criminal conviction, unless the conviction related to performance under this Contract.
- B. Arrests that did not result in a conviction being entered or charges being filed may not be considered.
- C. Not all criminal convictions or other negative information obtained in a background check will disqualify a Contract Worker from working under this Contract.
- D. Contractor must evaluate the relevance of the information to the work the Contract Worker will perform under this Contract.
- E. Contractor must consider the following factors in determining whether negative background information disqualifies a Contract Worker:

- Duties of the position
- Time, nature, and number of negative events and convictions
- Attempts and extent of rehabilitation efforts
- The relation between the duties of the position and the nature of the crime committed

The analysis of whether any information in a background check is a potentially disqualifying factor involves looking at the requirements of the Contract, the Scope of Work, where the work will be performed, the need for access to restricted areas, and the type of persons or places the Contract Worker will encounter. Contractor should review the background check results and determine whether the nature of the conviction or crime reported would create a risk to the City based on the Contract's requirements.

For a Contract Worker requiring a standard risk background check potentially disqualifying convictions include a record of theft, identity theft, computer fraud or abuse, burglary, arson, crimes against property, violent crimes, or other crimes involving dishonesty, or embezzlement. For a Contract Worker requiring a maximum risk background check, potentially disqualifying convictions include a record of child molestation, assault, sexual assault, crimes against a person, public indecency, drug offenses, forgery, theft, burglary, arson, crimes against property, violent crimes, crimes for financial gain, identity theft, computer fraud or abuse, and embezzlement.

If a background check shows that the disposition of an arrest is unknown, then Contractor must determine the disposition of the arrest.

Contractor will obtain a Contract Worker disclosure from each Contract Worker who will perform work under this Contract. Contractor will provide the Contract Worker disclosures to the City upon request. "Contract Worker disclosure" means an affidavit by a Contract Worker disclosing his or her prior criminal record. The Contract Worker disclosure must list all criminal convictions, including the nature of the crime, the date of the conviction, and the location where the crime and conviction occurred. The Contract Worker disclosure also grants to the City the right to review the background check results. (City of Phoenix A.R. 4.45)

In a standard risk background check, Contractor must review the results of the background check and decide if a Contract Worker should be disqualified for work under this Contract. Contractor must engage in whatever due diligence is necessary to make the decision on whether to disqualify a Contract Worker. After Contractor has made its decisions, a list of names of qualified Contract Workers will be provided to the City.

In a maximum risk background check, Contractor must conduct the same review as in a standard risk background check. However, when submitting its list of qualified Contract Workers, Contractor must also submit the results of the background checks to the City for review. After its review, the City will either approve or deny each Contract Worker.

If the City approves a Contract Worker, then the City will notify Contractor of that fact and the Aviation Department will issue the appropriate airport security badge to the Contract Worker.

If the City denies a Contract Worker, then the City will notify Contractor of that fact and Contractor will reevaluate the Contract Worker to determine whether the person should be disqualified. If Contractor believes there are extenuating circumstances that suggest that the Contract Worker should not be disqualified, then Contractor will discuss those circumstances with the City. The City will review the matter and its decision on disqualification is final.

The City may set up a secure folder or drop box for confidential materials related to maximum risk background checks. The City will not keep records related to maximum risk background checks after they are reviewed.

If Contractor is a sole proprietor, Contractor must submit to the City a copy of his or her own background check and a background check for all business partners, member, and employees that will work under this Contract and for whom the background check requirements of City of Phoenix A.R. 4.45 apply.

Contractor shall determine whether a Contract Worker is disqualified from performing work under this Contract.

STANDARD RISK BACKGROUND CHECK

A standard risk background check must be conducted for the term of this Contract or five years, whichever is shorter. Contractor shall conduct a standard risk background check on all Contract Workers whose work under this Contract requires:

- An airport security badge or key for access to City facilities,
- Access to sensitive information, confidential records, personal identifying information, or restricted City information, or
- Unescorted access to City facilities during normal and non-business hours.

“Personal identifying information” is defined by City of Phoenix A.R. 4.45.

Scope of the Standard Risk Background Check

The standard risk background check conducted by Contractor must be based on the real identity and legal name of the Contract Worker and include felony and misdemeanor records checks from any county in the United States, the state of Arizona, and any other jurisdiction where the Contract Worker has lived at any time in the last seven years.

MAXIMUM RISK BACKGROUND CHECK

A maximum risk background check must be conducted for the term of this Contract or five years, whichever is shorter. Contractor shall conduct a maximum risk background check on all Contract Workers whose work under this Contract requires:

- Working directly with a vulnerable adult or child under age 18,
- Any responsibility for the receipt of payment of City funds or control of inventories, assets, or records that are at risk of misappropriation,
- Unescorted access to City data centers, money rooms, high-value equipment rooms,
- Access to a private residence,
- Access to Homeland Defense Bureau-identified critical infrastructure sites or facilities, or
- Responsibility or access to City-identified critical infrastructure sites, City networks or data, cyber/IT/network assets, digital or cyber assets, workstations, or servers, by either remote or direct access.

Scope of the Maximum Risk Background Check

The maximum risk background check conducted by Contractor must include the search criteria conducted under a standard risk background check in addition to a search for all felony and misdemeanor convictions (not including traffic or parking violations), a sex offender check, and a search for all outstanding warrants. Based on the Scope of Work, Contractor shall also conduct a credit check (for cash handling, accounting, and compliance positions only), driving records check (for driving positions only), and fingerprint verification when the Contract Worker is working directly with a child under age 18 or a vulnerable adult or the work under the Contract will take the Contract Worker to a criminal justice information system (CJIS) location.

Maximum risk background checks are valid for the term of this Contract or three years, whichever is shorter.

Criminal Justice Information System (CJIS) Maximum Risk Background Check

If the Scope of Work of this Contract requires unescorted access to a CJIS location or if Contractor will have access to a CJIS infrastructure or information, then a CJIS maximum risk background check will be conducted, reviewed, and approved by the Phoenix Police Department or the Arizona Department of Public Safety.

22. AIRPORT SECURITY BADGE HANDLING PROCEDURES

Contractor will comply with the following airport security badge handling procedures:

Key Access Procedures. If a Contract Worker requires keyed access to enter a City facility, then a separate key will be issued and Contractor must complete a return form and submit it to the City for each key issued.

Stolen or Lost Badges or Keys. Contractor shall immediately report any lost or stolen airport security badge or key to the City. A new airport security badge application or key issue form must be completed and submitted along with payment of the applicable fee prior to issuance of a new airport security badge or key

Return of Badges or Keys. All airport security badges and keys are the property of the City and must be returned to the Badging Office within one business day after the Contract Worker's access to a City facility is no longer required under this Contract. Contractor shall collect a Contract Worker's airport security badge and all keys (1) when the Contract Worker's employment is terminated, (2) when the Contract Worker's services are no longer required at a City facility, or (3) when this Contract terminates, is cancelled, or expires, whichever occurs first.

Employee Identification and Access. Contract Workers must have an airport security badge and some form of verifiable company identification in their possession at all times while working under this Contract, unless otherwise provided in the Scope of Work. Contract Workers are strictly prohibited from entering any area of the Airport that is not authorized by the airport security badge or key issued to them by the Badging Office. The Aviation Department will determine who will have access to the Airport. Contract Workers access authority is only valid during their scheduled hours. Contractor shall provide the City with updates and changes in personnel as they occur.

Badge Fees. Contractor shall pay the airport security badge fees set forth in § 4-11(D) of the Phoenix City Code.

23. CONTRACTOR'S BREACH

Contractor agrees that the access control, airport security badge, and key requirements in this Section are necessary to preserve and protect public health, safety, and welfare. Therefore, Contractor shall be deemed in immediate breach of this Section upon the occurrence of any of the following:

- A Contract Worker gains access to a City facility or a restricted or secured area of the Airport without the proper airport security badge or key
- A Contract Worker uses another person's airport security badge or key to gain or attempt to gain access to a City facility or a restricted or secured area of the Airport
- A Contract Worker begins work under this Contract without passing the appropriate Background Screening and being issued the proper airport security badge or key
- A Contract Worker or Contractor submits false, incomplete, or misleading Background Screening information or submits any false, incomplete, or misleading information in an attempt to improperly obtain an airport security badge or key
- Contractor fails to collect and timely return a Contract Worker's airport security badge or key to the City within three days of the (1) date the Contract Worker's employment terminates, (2) the date the Contract Worker is assignment to another

City facility, or (3) when this Contract terminates, is cancelled, or expires, whichever occurs first

24. **LIQUIDATED DAMAGES AND REMEDIES FOR BREACH**

In addition to any other remedy available to the City at law or in equity, including the right to terminate this Contract, Contractor shall be liable for and shall pay to the City a stipulated damage in the amount of \$1,000.00 for each breach of this Section and for each time a Contract Worker entered a restricted or secured area of the Airport without proper authority. Contractor agrees that the stipulated damage amount is not a penalty but is a reasonable estimate of the actual harm to the City caused by a breach and that the harm was very difficult to estimate at the time this Contract was entered into.

25. **CONTRACTOR CERTIFICATION**

Contractor certifies to the City that Contractor has read the foregoing Background Screening requirements and that all Background Screening information Contractor furnished to the City is accurate, complete, and current. Contractor further certifies to the City that Contractor has satisfied all Background Screening requirements and verified the legal worker status of each Contract Worker as required under this Section.

26. **LAWFUL PRESENCE REQUIREMENT**

Pursuant to A.R.S. §§ 1-501 and 1-502, the City of Phoenix is prohibited from awarding a contract to any natural person who cannot establish that such person is lawfully present in the United States. To establish lawful presence, a person must produce qualifying identification and sign a City-provided affidavit affirming that the identification provided is genuine. This requirement will be imposed at the time of contract award. This requirement does not apply to business organizations such as corporations, partnerships or limited liability companies.

27. **BUSINESS AND OPERATION LICENSES, PERMITS AND CERTIFICATIONS REQUIRED**

On or before the submission of a bid for this project, bidder must possess all federal, state, county and City licenses, permits, certifications and any other legal authorizations required by law to transact business and to perform the services set forth in this Agreement (collectively "Business Licenses"). Bidder will submit a completed Bidder's Disclosure Statement as set forth in Pages B.D.S. - 1 to B.D.S. - 4, to be submitted within 3 days of bid opening by 5 p.m. and provide the following Business License information: (i) proper State of Arizona contractors license classification and number; (ii) City of Phoenix transaction privilege license number; (iii) federal tax identification number; and (iv) any special use or other zoning permits required for Bidder's operation and performance of the services under this Agreement. Unless provided otherwise in this solicitation, ***Bidder will be deemed non-responsive and the bid rejected if Bidder fails to possess the proper Business Licenses at the time of bid or fails to submit a substantially completed Bidder's Disclosure Statement as specified in this paragraph.***

28. **TAX LIABILITIES; DISCLOSURE OF CONVICTIONS AND BREACH(S) OF CONTRACT**

On or before the award of the contract for this project, the successful bidder will: (i) file all applicable tax returns and will make payment for all applicable State of Arizona and Maricopa County Transaction Taxes (ARS Sec. 41-1305) and City of Phoenix Privilege License Taxes (Phoenix City Code Sec.14-415); (ii) disclose any civil fines, penalties or any criminal convictions, other than for traffic related offenses, for violation of federal, state, county or city laws, rules or regulations including, but not limited to, environmental, OSHA, or labor compliance laws (collectively "Laws") by Bidder, Bidder's directors, managing members, responsible corporate officers or party who will be responsible for overseeing and administering this project (collectively

“Bidder”); and (iii) disclose any material breach(s) of an agreement with the City of Phoenix, any termination for cause or any litigation involving the City of Phoenix occurring within the past three calendar years. Unless provided otherwise in this solicitation, the successful bidder will be deemed non-responsible and the bid rejected for any of the following: (i) Bidder’s civil or criminal conviction, other than for traffic related offenses, for a violation of Laws within the past three calendar years; (ii) liability or culpability resulting in payment of fines or penalties in the cumulative total amount of \$100,000 or greater for a violation of “Laws” within the past three calendar years; (iii) material breach of a City of Phoenix agreement, termination for cause or litigation with the City of Phoenix within the past three calendar years; and (iv) Bidder’s failure to disclose the information as required by this provision. Further, after award of contract, in addition to any other remedy, Bidder’s failure to remit proper taxes to the City of Phoenix may result in the City withholding payment pursuant to Phoenix City Charter Chapter XVIII, Section 14 until all delinquent taxes, interest, and penalties have been paid.

State and Local Transaction Privilege Taxes:

In accordance with applicable state and local law, transaction privilege taxes may be applicable to this transaction. The state and local transaction privilege (sales) tax burden is on the person who is conducting business in Arizona and the City of Phoenix. The legal liability to remit the tax is on the person conducting business in Arizona. Any failure by the Contractor to collect applicable taxes from the City will not relieve the Contractor from its obligation to remit taxes.

It is the responsibility of the prospective bidder to determine any applicable taxes. The City will review the price or offer submitted and will not deduct, add or alter pricing based on taxes.

If you have questions regarding tax liability, seek advice from a tax professional prior to submitting bid. Once your bid is submitted, the Offer is valid for the time specified in this Solicitation, regardless of mistake or omission of tax liability.

If the City finds over payment of a project due to tax consideration that was not due, the Contractor will be liable to the City for that amount, and by contracting with the City agrees to remit any overpayments back to the City for miscalculations on taxes included in a bid price.

For purposes of A.R.S. 42-5075(P), this contract is subject to A.R.S. Title 34.

Tax Indemnification:

Contractor will, and require the same of all subcontractors, pay all federal, state and local taxes applicable to its operation and any persons employed by the Contractor. Contractor will, and require the same of all subcontractors, hold the City harmless from any responsibility for taxes, damages and interest, if applicable, contributions required under federal, and/or state and local laws and regulations and any other costs including transaction privilege taxes, unemployment compensation insurance, Social Security and Worker’s Compensation.

Tax Responsibility Qualification:

Contractor may be required to establish, to the satisfaction of City, that any and all fees and taxes due to the City or the State of Arizona for any License or Transaction Privilege taxes, Use Taxes or similar excise taxes, are currently paid (except for matters under legal protest).

Contractor agrees to a waiver of the confidentiality provisions contained in the City Finance Code and any similar confidentiality provisions contained in Arizona statutes relative to State Transaction Privilege Taxes or Use Taxes.

Contractor agrees to provide written authorization to the City Finance Department and to the Arizona State Department of Revenue to release tax information relative to Arizona Transaction

Privilege Taxes or Arizona Use Taxes in order to assist the Department in evaluating Contractor's qualifications for and compliance with contract for duration of the term of contract.

29. **LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)**

The Contractor will provide an easily accessible area to serve the construction site that is dedicated to the separation, collection and storage of materials for recycling including (at a minimum) paper, glass, plastics, metals, and designate an area specifically for construction and demolition waste recycling. The contractor must provide documentation that the materials have been taken to a Maricopa County approved recycling facility.

30. **PROTEST PROCEDURES**

Any bidder who has any objections to the awarding of a contract to any bidder by the City of Phoenix, pursuant to competitive bidding procedures, will comply with Phoenix City Code Chapter 2, Section 187." A copy of the Protest Policy is also available online at:

<https://www.phoenix.gov/streets/procurement-opportunities>

31. **UTILITY-RELATED CONSTRUCTION DELAY DAMAGES CLAIM PROCEDURES**

The following procedure is intended to provide a fair and impartial process for the settlement of construction delay claims associated with unknown or improperly located utility facilities.

The Contractor will immediately notify, in writing, the Project Engineer of any potential utility-related delay claim.

The Contractor will immediately notify the appropriate liaison of the affected utility verbally, followed by a written notification.

The Contractor will coordinate an investigation of the situation with the affected utility and the City's Project Manager. After resolution, the Contractor will provide written notification of the settlement of the claim to all affected parties.

If the affected utility makes a decision to handle negotiations for a claim, their personnel will be responsible for monitoring the project and all negotiations with the Contractor regarding the claim.

The Contractor will determine to document requirements of the affected utility for their acceptance of responsibility for the claims. The Contractor will provide four (4) copies of the required documentation to the utility involved and two (2) copies of this documentation to the Project Engineer. The Contractor will obtain written confirmation from the utility company involved of their documentation requirements.

32. **PROMPT PAYMENT (DBE)**

The City adheres to the prompt payment provisions of ARS 34-221. A prompt payment clause will be included in every City Contract or subcontract on projects funded either in whole or in part by USDOT. The City's prompt payment clause reads as follows:

A. **Contractor Payment to Subcontractor or Supplier.** Contractor will pay to its subcontractors or material suppliers and each subcontractor will pay to its subcontractor or material supplier, within seven (7) days of receipt of each progress payment, the amounts attributable to the Contractor, subcontractor, or material supplier for work performed or materials supplied. In addition, any reduction of retainage to the Contractor must also result in a like reduction to subcontractors for their work successfully completed within 14 days of the reduction of the retainage to the Contractor. No Contract between Contractor and its Contractors,

subcontractors, and material suppliers may materially alter the rights of any Contractor, subcontractor, or material supplier to receive prompt and timely payment as provided herein. Any diversion by Contractor, or any subcontractor, of payments received for work performed on a Contract, or failure to reasonably account for the application or use of such payments, constitutes sufficient grounds for City to take any one or more of the following actions: 1) withhold future payments including retainage until proper disbursement has been made; 2) refusal of all future bids or offers from the Contractor for a period not to exceed one year or 3) cancellation of the Contract.

- B. **Alternate Dispute Resolution.** If entitlement to the payment is in dispute, the parties to the dispute will submit the matter to either: a) binding arbitration, b) to some other binding alternative dispute resolution (ADR), or c) a City of Phoenix facilitated mediation process within a reasonable period of time, not to exceed fourteen (14) calendar days. Once an ADR determination has been made on any disputed claim, the determination will be implemented by the disputing parties within seven (7) calendar days of that determination.
- C. **Inspection and Audit.** The provisions of A.R.S. Section 35-214 will apply to this Agreement. City will perform the inspection and audit function specified therein and such inspection and audit may include, at City's option, sole and unfettered discretion, the prompt payment requirements contained in Paragraph 1, above.
- D. **Non-waiver.** Should City fail or delay in exercising or enforcing any right, power, privilege or remedy under this Section, such failure or delays will not be deemed a waiver, release or modification of the requirements of this Section or of any of the terms or provisions thereof.
- E. **Inclusion of this Provision in Subcontracts.** Contractor will include the provisions of these paragraphs in every subcontract, including procurement of materials and leases of equipment.
- F. **No Subcontractor Claim.** Nothing contained in this section will provide a basis for any subcontractor to assert any claim against the City of Phoenix for its administration, enforcement or waiver of the provisions of this Prompt Payment provision.

As this is a federally assisted project, it is subject to the requirements of Executive Order 11246 pertaining to Equal Employment Opportunity.

33. **CHANGE ORDERS**

Owner reserves the right to decrease adjustments made in any change order if, upon audit of Contractor's records, the audit discloses Contractor provided false or inaccurate cost and pricing data in negotiating the change order. In enforcing this provision, the parties will follow the procedure provided in the Federal Acquisition Regulation (FAR) clause 52.214-27, found in 48 CFR Part 52.

34. **ADA AND ANSI ACCESS OF PREMISES DURING CONSTRUCTION**

Contractor will maintain ADA and ANSI accessibility requirements during construction activities in an occupied building or facility. ADA and ANSI accessibility requirements will include, but not be limited to, parking, building access, entrances, exits, restrooms, areas of refuge, and emergency exit paths of travel. Contractor will be responsible for the coordination of all work to minimize disruption to building occupants and facilities.

35. **PROJECT MANAGEMENT INFORMATION SYSTEM (UNIFIER)**

The Aviation Department requires all project related documents to be uploaded to UNIFIER. The following information provides a guideline for utilization. Any questions related to the requirements of UNIFIER should be directed to the Aviation Department Project Manager.

- A. The Contractor will be required to maintain all project records in electronic format. The City provides an Application Service Provider (ASP) web-based project management database which the Contractor will be required to utilize in the fulfillment of the contract requirements. Although this electronic platform does not fulfill this requirement in its entirety, the Contractor will be required to utilize this platform as the basis for this work. The City will provide training to the Contractor's designated staff members and will provide online access to the UNIFIER software.
- B. The Contractor can expect to use this ASP to process all primary level tri-partite contract documents related to the construction phase of the Project including but not limited to: requests for interpretation/information, potential Change Orders, Change Orders, construction meeting minutes, Submittals, Design Professional's supplemental instructions and Payment Requests.
- C. The Contractor will be required to process information into electronic digital form. In order to fulfill this requirement, the Contractor will provide all necessary equipment to perform the functions necessary to generate, convert, store, maintain, connect to web-based ASP and transfer electronic data.
- D. The Contractor will provide a computerized networked office platform with broadband internet connectivity. Wired or wireless is acceptable. This platform will function well in a web-based environment utilizing an internet browser compatible with the Aviation Department UNIFIER ASP system.

36. **PAYMENT RETENTION**

At the start of construction, ten percent of all pay requests will be retained by the City to guarantee complete performance of the contract. When the work is fifty percent complete, this amount may be reduced to five percent providing that construction progress and quality of work is acceptable to the City. Any funds, which are withheld from the Contractor, will be paid no later than sixty days after completion of the Contract and settlement of all claims.

In lieu of retention, the Contractor may provide as a substitute, an assignment of money market accounts, demand deposit accounts, or time certificates of deposit (CDs) from a bank licensed by Arizona, securities guaranteed by the United States, securities of the United States, the state of Arizona, Arizona counties, Arizona municipalities, Arizona school districts, or shares of savings and loan institutions authorized to transact business in Arizona. These securities are referred to as "Qualified Securities."

CDs assigned to the City must be maintained at the City's single servicing bank, currently Chase Bank, Arizona, in the form of time deposit receipt accounts. CDs will be assigned exclusively for the benefit of the City of Phoenix pursuant to the City's form of escrow Agreement. Escrow Agreement forms may be obtained from the Finance Department by calling (602) 262-4918.

Qualified Securities deposited in lieu of retention must be deposited into a separate account with a bank having a branch located in the City of Phoenix and be assigned exclusively for the benefit of the City of Phoenix pursuant to the City's form of escrow and/or deposit Agreement. Escrow Agreement and Deposit Agreement forms may be obtained from the Contracts Specialist.

37. **FAIR TREATMENT OF WORKERS**

The Contractor will keep fully informed of all Federal and State laws, County and City ordinances, regulations, codes and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any way affect the conduct of the work. He will at all times observe and comply with all such laws, ordinances, regulations, codes, orders and decrees; this includes, but is not limited to laws and regulations ensuring fair and equal treatment for all employees and against unfair employment practices, including OSHA and the Fair Labor Standards Act (FLSA). The

contractor will protect and indemnify the Contracting Agency and its representatives against any claim or liability arising from or based on the violation of such, whether by himself or his employees.

38. **CITY OF PHOENIX EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENT**

1. In order to do business with the City, Contractor must comply with Phoenix City Code, 1969, Chapter 18, Article V, as amended, Equal Employment Opportunity Requirements. Contractor will direct any questions in regard to these requirements to the Equal Opportunity Department, (602) 262-6790.
2. Any Contractor in performing under this contract will not discriminate against any worker, employee or applicant, or any member of the public, because of race, color, religion, sex, national origin, age, or disability nor otherwise commit an unfair employment practice. The Contractor will ensure that applicants are employed, and employees are dealt with during employment without regard to their race, color, religion, sex, national origin, age, or disability, and will adhere to a policy to pay equal compensation to men and women who perform jobs that require substantially equal skill, effort, and responsibility, and that are performed within the same establishment under similar working conditions. Such action will include but not be limited to the following: Employment, promotion, 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 further agrees that this clause will be incorporated in all subcontracts with all labor organizations furnishing skilled, unskilled and union labor, or who may perform any such labor or services in connection with this contract.

If the Contractor employs more than thirty-five employees, the following language will apply as the last paragraph to the clause above:

The Contractor further agrees not to discriminate against any worker, employee or applicant, or any member of the public, because of sexual orientation or gender identity or expression and will ensure that applicants are employed, and employees are dealt with during employment without regard to their sexual orientation or gender identity or expression.

3. *Documentation.* Contractor may be required to provide additional documentation to the Equal Opportunity Department affirming that a nondiscriminatory policy is being utilized.
4. *Monitoring.* The Equal Opportunity Department will monitor the employment policies and practices of suppliers and lessees subject to this article as deemed necessary. The Equal Opportunity Department is authorized to conduct on-site compliance reviews of selected firms, which may include an audit of personnel and payroll records, if necessary.

39. **WAGE DETERMINATION**

In the event that a wage determination decision of the Secretary of Labor is required for a project, (attached hereto on pages G.W.D. – 1 to 9 and made a part hereof), and has been superseded by any subsequent wage determination decision(s) published up to and including ten (10) days prior to bid opening, the most recent applicable wage decision will be incorporated by reference, and the successful bidder agrees to be bound by it, regardless of what is contained in the specifications. State or local wage rates will not apply if the state or local wage rate exceeds the corresponding Federal Wage Determination rate.

40. **WORKFORCE REPORTING REQUIREMENTS**

The contractor will submit payrolls electronically through the internet to the City of Phoenix web-based certified payroll tracking system. The City of Phoenix uses the “LCP Tracker” web-site to track the certified payroll information. Additional information regarding the use of this system is

available at <https://lcptracker.com>. This requirement will also apply to every lower-tier subcontractor that is required to provide weekly certified payroll reports.

41. **PAYMENT WITHHOLDING**

Payrolls, including subcontractor's payrolls, must be submitted weekly no later than seven (7) days after each pay period ending date. Payments may be withheld in part or in full until payrolls are received and reviewed to assure compliance of the Federal Labor Standards.

Failure to clarify, when requested, discrepancies between hourly wages paid individual workers and the minimum hourly wages required by the Federal Wage Decisions contained in the Contract documents may also affect the complete or timely release of payments.

42. **LABOR COMPLIANCE PRECONSTRUCTION CONFERENCE**

On all federally assisted projects, a Labor Compliance Conference must be held after project award and prior to the established Notice to Proceed. This meeting is separate from and in addition to the pre-construction conference.

The successful bidder will schedule the conference by calling the Labor Compliance Office, (602) 261-8287. Minimum attendance will be a corporate officer, who is authorized to execute and sign documents for the firm and the payroll representative of the prime, sub and lower-tier Contractors.

43. **DBE PARTICIPATION**

This project will utilize Federal funds provided by the Federal Aviation Administration (FAA) and is subject to the requirements of 49 Code of Federal Regulations (CFR) Part 26 and the U.S. Department of Transportation DBE Program. The Contractor is required to meet the DBE program requirements and agrees to provide opportunities for the fair and full utilization of DBEs. For this business opportunity, the City has not established a race- and gender-conscious DBE participation goal.

To participate in this business opportunity as a recognized DBE, only firms certified by the City or another AZUCP member and certified in the specified scopes of work will be considered in calculating DBE participation resulting from RGN measures on this contract.

The Contractor agrees that the following will be incorporated into all subcontracts of this Contract entered into by the General Contractor:

"The contractor, subrecipient, or subcontractor will not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor will carry out applicable requirements of 49 CFR Part 26, in the award and administration of USDOT-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 and/or any other such remedy as the City deems appropriate."

Refer to the attached Disadvantaged Business Enterprise Program Clause, pages D.B.E.C. - 1 to 10 and Disadvantaged Business Enterprise Program Reporting Forms D.B.E.F. - 1 to 2.

Failure to provide the following forms may be just cause for declaring your bid non-responsive.

- *Completed Documentation of Outreach Efforts Attachment A form (Page D.B.E.F. -1)*

44. **FEDERAL REQUIREMENTS COMPLIANCE**

This project will utilize federal funds provided by the Federal Aviation Administration. The Contractor will be required to meet all federal requirements as they pertain to this contract. Page F.R. - 1 contains a listing of the minimum requirements.

Buy American Preference

The Contractor is required to comply with Buy American preferences established under Title 49 U.S.C. Section 50101. Unless otherwise formally approved by the Federal Aviation Administration, all acquired steel and manufactured products installed must be produced in the United States. Be advised that the North American Free Trade Agreement does not apply to Aviation Improvement Projects.

As a condition of bid responsiveness, Bidders must submit the appropriate Buy American certification with their proposal. Installation of equipment/material that are manufactured in the United States and for which no formal waiver exists is ineligible. While the FAA does have the authority to waive the Buy American provisions if specific conditions exist, the Contractor will not assume such a waiver is valid unless written approval is granted by the FAA. The "Buy American Requirement" certification form (Attachment 1) is due with the bid. ***Failure to properly complete, sign and submit the form with bid will result in bid rejection.***

Non-Segregated Facilities

The Contractor and its subcontractors certifies that they do not maintain or provide for its employees any segregated facilities at any its establishments, and that it does not permit its employees to perform their services at any location, under its control where segregated facilities are maintained. The Contractor certifies further that it will not maintain or provide for its employees segregated facilities at any of its establishments, and that it will not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The "Certification of Non-Segregated Facilities" certification form (Attachment 6) is due with the bid. ***Failure to properly complete, sign and submit the form with bid will result in bid rejection.***

Lobbying and Influencing Federal Employees

No Federal appropriated funds will be paid, by or on behalf of the Contractor, 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 the making of any Federal grant and the amendment or modification of any Federal grant.

If any funds other than Federal appropriated funds have been 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 any Federal grant, the Contractor will complete and submit Standard Form-LLL, "Disclosure of Lobby activities," in accordance with its instructions. The "Affidavit By Contractor That There was No Collusion in the Selection of the Contract" certification form (Attachment 2) is due with the bid. ***Failure to properly complete, sign and submit the form with bid will result in bid rejection.***

Rights to Inventions

All rights to inventions and materials generated under this contract are subject to regulations issued by the FAA and the Sponsor of the Federal grant under which the contract is executed. The "Rights in Data and Rights in Invention" certification form (Attachment 3) is due with the bid. ***Failure to properly complete, sign and submit the form with bid will result in bid rejection.***

Debarment, Suspension, Ineligibility and Voluntary Exclusion

The Contractor and its subconsultants/subcontractors, by submission of its bid proposal certifies that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting its bid proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts.

Where the Contractor or any lower tier participant is unable to certify this statement, it will attach an explanation to its bid. The "Certification Regarding Debarment, Suspension, Proposed Debarment, and other Responsibility Matters" form (Attachment 8) is due with the bid. ***Failure to properly complete, sign and submit the form with bid will result in bid rejection.***

Trade Restriction Clause

The "Trade Restriction Clause" form (Attachment 4) is due with the bid. ***Failure to properly complete, sign and submit the form with bid will result in bid rejection.***

Equal Employment Opportunity

The Contractor agrees that it will undertake affirmative action in conformance with 14 CFR Part 152, Subpart E, to insure that no person will on the grounds of race, creed, color, national origin or sex be excluded from participating in any employment, contracting or leasing activities covered in 14 CFR Part 152, Subpart E. The Contractor assures that no person will be excluded on such grounds from participating in or receiving the services or benefits of any program or activity covered by Subpart E. The Contractor further agrees that it will require its covered suborganizations to provide assurances to the Contractor that they similarly will undertake affirmative action and that they will require like assurances from their suborganizations, as required by 14 CFR Part 152, Subpart E.

If the Contractor is a construction contractor on the Airport, the Contractor will submit to the City of Phoenix the reports required by paragraph (e) of 14 C.F.R. § 152.415, on the same basis as stated in paragraph (e) of 14 C.F.R. § 152.415, and the Contractor will require each subcontractor to submit the reports required by paragraph (f) of 14 C.F.R. § 152.415 through the Contractor to the City of Phoenix, for transmittal by the City of Phoenix to the FAA. The "Contractors Statement on Previous Contracts subject to EEO Clause" certification form (Attachment 5) ***is due prior to contract award.***

Federal Affirmative Action Requirements

The Contractor will comply with the federal Affirmative Action requirements as provided by 14 C.F.R. Part 152, subpart E during the term of the Contract and the Contractor will require its subcontractors to also comply with the federal Affirmative Action requirements as set out above, and as may be amended. Failure of the Contractor and its subcontractors to maintain compliance during the term of the Contract, including renewal options, is a material breach and may result in termination of this Contract.

45. RELEASE OF INFORMATION – ADVERTISING AND PROMOTION

The Contractor and its subcontractors will not publish, release, disclose or announce to any member of the public, press, official body, or any other third party: (1) any information concerning this Agreement, the services, or any part thereof; or (2) any documentation or the contents thereof, without the prior written consent of the City, except as required by law. The name of any site on which services are performed will not be used in any advertising or other promotional context by Contractor and its subcontractors without the prior written consent of the City.

46. OFF-DUTY POLICE OFFICER REQUIREMENTS

Off-duty police officers are required for construction projects as defined in the most recent edition of the City of Phoenix Traffic Barricade Manual and TRACS permit. The Contractor must competitively procure off-duty police with vendors who are Authorized Traffic Coordinators with the City of Phoenix Police Department or Phoenix Police Department off-duty detail.

The following requirements must be included in the procurement:

1. Hourly fees charged

2. Administrative fees (administrative fees to be charged as a part of the hourly rate, not billed separately)
 - a. Pay applications requesting reimbursement for Off Duty Police hours worked will be accompanied with itemized documentation indicating officer name, date worked, hours worked, time of day worked and location.
 - b. For audit purposes, contractor's files will contain documentation from the successful off duty vendor that the above items are accounted for in the vendor's price proposal.
3. Off Duty Police needs at Phoenix Sky Harbor International Airport (boundaries include 24th Street to 143 and Air Lane Road to Old Tower Road) require that the Officers:
 - Must be City of Phoenix Police Officers with Phoenix Sky Harbor International Airport all areas badge – preference for Airport Bureau police officers
 - Have experience working in active airport environment

For all other areas at Phoenix Sky Harbor International Airport and Phoenix Deer Valley Airport, it is requested that Off Duty City of Phoenix Police be given preference over others due to their familiarity with City of Phoenix laws and procedures.

47. **PROJECT STAFFING**

- **Key Personnel:** Before starting work, Contractor must submit detailed résumés of key personnel involved in that work for City's approval (which City will not unreasonably withhold). If Contractor later desires to change key personnel involved in that work, Contractor must submit detailed résumés of the new personnel for City's approval (which City will not unreasonably withhold).
- **Qualified Staff:** Contractor must maintain an adequate and competent staff of qualified persons—as City may determine in its sole discretion—during performance of this Master Agreement. If City in its sole discretion determines that any of Contractor's staff is objectionable, Contractor must take prompt corrective action or replace that staff with new personnel, subject to City's approval.
- **Third-Party Employment Brokers:** Contractor and Subcontractors will not utilize a third party labor broker for any construction worker under this Agreement. The Contractor and Subcontractors must be the employers of record for its construction staff under this Agreement.

48. **NO ISRAEL BOYCOTT**

If this Contract is valued at \$100,000 or more and requires Contractor (a company engaging in for-profit activity and having ten or more full-time employees) to acquire or dispose of services, supplies, information technology, or construction, then Contractor must certify and agree that it does not and will not boycott goods or services from Israel, pursuant to Title 35, Chapter 2, Article 9 of the Arizona Revised Statutes. Provided that these statutory requirements are applicable, Contractor by entering this Contract now certifies that it is not currently engaged in, and agrees for the duration of the Contract to not engage in, a boycott of goods or services from Israel.

49. **NO FORCED LABOR OF ETHNIC UYGHURS**

If this Contract requires Contractor (a company engaging in for-profit activity and having ten or more full-time employees) to acquire or dispose of services, supplies, information technology, goods, or construction, then pursuant to Title 35, Chapter 2, Article 10 of the Arizona Revised Statutes Contractor must certify and agree that it and any contractors, subcontractors, or suppliers it utilizes do not and will not use the forced labor of ethnic Uyghurs in the People's Republic of China or any goods or services produced by such forced labor. Provided these statutory requirements are applicable, Contractor, by entering this Contract, now certifies it is not currently

engaged in, and agrees for the duration of the Contract to not engage in, (a) the use of forced labor of ethnic Uyghurs in the People's Republic of China; (b) the use of any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China; or (c) the use of any contractors, subcontractors, or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China.

50. **COMPLIANCE WITH LAWS**

Contractor must comply with all existing and subsequently enacted federal, state and local laws, ordinances and codes, all applicable ADA requirements, applicable FAA Advisory Circulars, and regulations that are, or become applicable to this Agreement. If a subsequently enacted law imposes substantial additional costs on Contractor, a request for an amendment may be submitted pursuant to this Agreement. Contractor is also required to certify its compliance with all applicable laws and Contractor must pass along these requirements to its Subcontractors. If any of Contractor's certifications is found to be false, the City may terminate this Agreement or impose other remedies due to the false certification. See also Exhibit A, Supplemental Terms and Conditions Applicable to All Airport Agreements.

51. **HEAT MITIGATION**

Per Phoenix City Code G-7241, effective April 25, 2024, any Contractor whose employees and contract workers perform work in an outdoor environment under this contract must keep on file a written heat safety plan. The City may request a copy of this plan and documentation of all heat safety and mitigation efforts currently implemented to prevent heat-related illnesses and injuries in the workplace. The plan must also be posted where it is accessible to employees. At a minimum, the heat safety and mitigation plan and documentation required under this provision shall include each of the following as it relates to heat safety and mitigation:

1. Availability of sanitized cool drink water free of charge at locations that are accessible to all employees and contract workers.
2. Ability to take regular and necessary breaks as needed and additional breaks for hydration.
3. Access to shaded areas and/or air conditioning.
4. Access to air conditioning in vehicles with enclosed cabs. All such vehicles must contain functioning air conditioning by no later than May 1, 2025.
5. Effective acclimatization practices to promote the physiological adaptations of employees or contract workers newly assigned or reassigned to work in an outside environment.
6. Conduct training and make it available and understandable to all employees and contract workers on heat illness and injury that focuses on the environmental and personal risk factors, prevention, how to recognize and report signs and symptoms of heat illness and injury, how to administer appropriate first aid measures and how to report heat illness and injury to emergency medical personnel.

The Contractor further agrees that this clause will be incorporated in all subcontracts with subconsultants, sublicensees or sublessees who may perform labor or services in connection with this contract. Additionally, the Contractor agrees to require all subcontractors, sublicensees or sublessees to include this clause in all contracts with any third party who is contracted to perform labor or services in connection with this contract. It is the obligation of the Contractor to ensure compliance by its subcontractors.



City of Phoenix

Disadvantaged Business Enterprise Program

DBE – Design Bid Build (DBB) Contract Clause Race Neutral – Non-Negotiated

PROJECT #: AV41000079 ADOT

CONTRACT #:

PROJECT NAME: PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II

The City of Phoenix has shown a historical commitment to business diversity. The City of Phoenix and its partners strive to advance the economic growth of small and minority businesses through its Disadvantaged Business Enterprises (DBE) Program.

The City of Phoenix DBE Program is managed and administered by the City's Equal Opportunity Department, Contract Compliance Division. Through a coordinated effort among several city departments and partner agencies, the DBE Program provides certification and opportunities in construction, purchasing, management and technical assistance.

SECTION I. DEFINITIONS

City means the City of Phoenix for purposes of this Contract.

Arizona Unified Certification Program (AZUCP) means a consortium of government agencies organized to provide reciprocal DBE certification within Arizona pursuant to 49 Code of Federal Regulations (CFR) Part 26. The official DBE database containing eligible DBE firms certified by AZUCP can be accessed at: <https://utracs.azdot.gov>.

Arizona's Unified Transportation Registration and Certification System (AZ UTRACS) is a comprehensive internet-based business directory containing certified ACDBEs, DBEs and SBCs. The directory includes detailed firm profiles that includes capabilities and geographic locations that can be accessed at: <https://utracs.azdot.gov/Search>.

The City of Phoenix Certification and Compliance System means the web-based certification and compliance system used to track and monitor DBE and Small Business Participation. The system can be accessed at: <https://phoenix.diversitycompliance.com>.

Contract means a legally binding agreement that creates obligation between a seller to furnish supplies or services (including construction and professional services) and the buyer to pay for them.

Equal Opportunity (EO) Compliance Specialist means an Equal Opportunity Department (EOD) employee responsible for DBE Program compliance with this contract.

EOD means the City of Phoenix Equal Opportunity Department.

Joint Venture (JV) means an association between two or more persons, partnerships, corporations, or any combination thereof, formed to carry on a single business activity. The JV is limited in scope and duration to this Contract. The resources, asset, and labor of the participants must be combined in an effort to accrue profit.

Outreach Efforts means the diligent and good faith efforts demonstrated by a Submitter to solicit participation from interested and qualified DBEs and other Small Businesses. Submitter must identify and document potential business opportunities for DBEs and other Small Businesses, describe what efforts were undertaken to solicit DBE and other Small Business participation, disclose results of negotiations with DBEs and other Small Businesses, and communicate and record Submitter's selection decisions relating to DBE and Small Business participants.

Bidders List means a list created by the submitter, consisting of information about all DSMB and non-DSMB firms that bid or quote on the project. The list should include the firm's name; address; firm's DBE or non-DBE status; race and sex information for the firm's majority owner; NAICS code applicable to each scope of work the firm sought to perform in its bid; age of the firm; and the annual gross receipt of the firm.

Disadvantaged Business Enterprise (DBE) means a for-profit Small Business Concern, that has at least 51% owned and controlled by individuals or individual who are socially and economically disadvantaged, that have successfully



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Disadvantaged Business Enterprise Program

completed the DBE certification process and have been granted DBE status by a UCP member pursuant to the criteria contained in 49 CFR Part 26.

Commercially Useful Function (CUF) means that a DBE is responsible for executing 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. If a DBE does not perform or exercise responsibility for at least 30% of the total cost of its contract with its own work force, or if the DBE Subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, the DBE is presumed not to be performing a Commercially Useful Function.

Goods and Services Providers are firms that provide goods and services that represent a CUF as a DBE or Small Business

Manufacturer means a firm that owns (or leases), operates, or maintains 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.

Regular Dealer/Supplier 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.

Broker is a firm who arrange, facilitate, or expedite transactions.

Small Business Concern (SBC) means, with respect to firms seeking to participate in contracts funded by the U.S. Department of Transportation (US DOT), a Small Business Concern as defined in section 3 of the Small Business Act and Small Business Administration regulations implementing the Act (13 CFR part 121), which Small Business Concern does not exceed the cap on average annual gross receipts specified in 49 CFR § 26.65(b). "Small Business" and "Small Business Concern" are used interchangeably in this DBE Contract Clause.

Small Business Enterprise (SBE) means a for-profit Small Business that has been determined to meet the requirements for SBE certification with the City of Phoenix and whose certification is in force at the time of the award of business by the City. A directory of currently certified SBE firms is located at <https://phoenix.diversitycompliance.com>.

Race-Neutral (RN) Measures means a measure or program that is or can be used to assist all Small Businesses.

Subcontract means a contract at any tier below the prime contract, including a purchase order.

Subcontractor means a firm that holds a contract/agreement between a firm and a lower tier contractor, including a vendor under a purchase order.

Submitter means a contractor, corporation, or firm that tenders a submittal to the City to perform services requested by a solicitation or procurement. The submittal may be direct or through an authorized representative. (Submitter is inclusive of the terms: *Bidder, Offeror, Proposer, Respondent*, etc.)

Responsive Submitter means a firm that has met and submitted the solicitation requirements.

Successful Submitter means a firm that has been awarded the contract by the City to perform services or furnish supplies requested by a solicitation or procurement.

Responsible Submitter means a firm that has been selected to continue in the procurement process by the City.



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Disadvantaged Business Enterprise Program

Contractor means the submitting firm that was awarded the given contract with the City, to perform the work or service as specified by the contract.

SECTION II. GENERAL REQUIREMENTS

A. Applicable Federal Regulations

This Contract is subject to DBE requirements issued by USDOT in 49 CFR Part 26. Despite the lack of a race- and sex-conscious DBE participation goal for this Contract, the City must track and report DBE participation that occurs as a result of any procurement, goods/services, or other arrangement involving a DBE. For this reason, the Contractor must provide all relevant information to enable the required reporting.

B. DBE Participation

For this solicitation, the City has *not* established a race- or sex-conscious DBE participation goal. The City extends to each individual, firm, vendor, supplier, contractor, and Subcontractor an equal economic opportunity to compete for business. The City uses race- and sex-neutral measures to facilitate participation of DBEs. The City strongly *encourages* each Submitter to voluntarily subcontract with DBEs to perform a Commercially Useful Function (CUF) for the part of the work that the Contractor might otherwise perform with its own forces.

C. Counting DBE Participation

The City will count DBE participation as authorized by federal regulations. A summary of these regulations can be found at www.ecfr.gov (49 CFR Part 26.39 and Part 26.55).

D. Small Business Participation

The City will track the participation of all approved businesses throughout the life of this contract. The City will count Small Business participation as authorized by federal regulations. A summary of these regulations can be found at www.ecfr.gov (49 CFR Part 26.39).

The Bidder/Contractor shall provide a Small Business Participation Plan (**SBPP**) on an annual basis by the anniversary date of contract execution. The SBPP must contain strategies to foster small business participation and information concerning the small businesses, including any changes to the initial SBPP. To be considered responsive, the SBPP 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 SBPP must include an estimated time frame in which actual DBE subcontracts would be executed.

E. DBE Certification

Only firms (1) certified by the City or another AZUCP member or another UCP member, and (2) contracted to perform a Commercially Useful Function (CUF) on scopes of work for which they are certified, may be considered to determine DBE participation resulting from RGN measures on this Contract.

F. Civil Rights Assurances.

As a recipient of USDOT funding, the City has agreed to abide by the assurances found in 49 CFR Parts 26. Each Contract signed by the City and the Contractor, and each Subcontract signed by the Contractor and any Subcontractor, must include the following assurance verbatim:

- a. "The contractor, sub recipient or Subcontractor must not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor must 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.



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- b. The contractor, sub recipient or Subcontractor agrees to include the above statements in any subsequent agreement or contract covered by 49 CFR, Part 26, that it enters and cause those businesses to similarly include the statement in further agreements.”

G. Nondiscrimination/Equal Opportunity

The City will not 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 49 CFR Parts 26, on the basis of race, color, sex, or national origin.

In administering its DBE program, the City will 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 DBE Program with respect to individuals of a particular race, color, sex, or national origin.

The City further agrees to meet the nondiscrimination requirements provided in 49 CFR Part 26, §26.7 with respect to the award and performance of any agreement, contract or Subcontract.

The City will take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts and agreements covered under the DBE Program.

H. DBE Open-Ended Participation Plans

Submitter must submit a DBE Open-Ended Participation Plan (OEPP).

OEPP must include a narrative of their commitment to use good faith efforts and provide details of the types of subcontracting work or services (with projected dollar amount) that the Submitter will solicit DBEs to perform. The OEPP must include an estimated time frame/schedule in which the subcontracted work to be performed by the DBE will be accomplished.

Once the contract is awarded, the City and the Contractor may agree to make written revisions to the OEPP throughout the life of the project. The City will monitor and evaluate whether the Contractor is using good faith efforts to comply with the OEPP and the schedule. The Contractor must submit a revised OEPP on an annual basis and/or at the start of every GMP (as applicable) to meet the Contractor's small business utilization commitment.

I. Required Outreach Efforts

The City has implemented outreach requirements for this contract. Specifically, each contract must:

- (1) identify small-business-participation opportunities, including Commercially Useful Functions (CUF);
- (2) actively solicit proposals from small businesses;
- (3) evaluate small-business proposals; and
- (4) communicate selection decisions to small businesses, including each rejection of a small-business proposal.

If a Contractor fails to conduct these Outreach Efforts or fails to submit the required documentation of Contractor's Outreach Efforts as indicated, the City may determine that the Contractor is noncompliant.

SECTION III. PRE-AWARD SUBMITTAL REQUIREMENTS

A. Form EO1 - 100 – Statement of Outreach Commitment

At the time of bid submittal Submitter must sign, date and submit a completed Form EO1 - 100 Statement of Outreach Commitment, with its initial qualifications-based submittal.

B. Form EO2 - 100 - Small Business Outreach Efforts and Bidders List

At the time of bid submittal, each Submitter must complete and submit **Form EO2-100 Small Business Outreach Efforts and Bidders List** contact information columns A, B, C, and D documenting its diligent, earnest outreach efforts for subcontracting work as described in this clause.



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Submitter must list all DBEs and all Small Business Concerns (SBC)s contacted by the Submitter. Submitter must also provide the following minimum information to document its Outreach Efforts and Bidders List in the designated columns within Form EO2 - 100:

1. Column A - Small Business Name and Contact Information

Must list each business's full legal name and contact information, including address, phone number and email and/or fax. Submitter must inquire to obtain the following: the number of number of years in business, its range of annual gross receipts, sex of majority owner and race of majority owner.

2. Column B - Business Status (DBE, SBC, SBE)

Indicate the business status. Check all that apply, if known.

- The official DBE database containing eligible DBE and SBC firms can be accessed at: <https://utracs.azdot.gov>.
- City of Phoenix SBE Certification Directory can be accessed at: <https://phoenix.diversitycompliance.com>.

3. Column C - Scope(s) of Work Solicited

List the NAICS Cods and scope(s) of work solicited for which the small business was considered for participation in the proposal. The solicitation must include a description of the scope(s) of work being requested.

4. Column D - Solicitation Method

Indicate the solicitation method by which each small business was contacted for your outreach efforts and provide supporting documentation. Supporting documentation must include a copy of the actual solicitation sent to DBE. The solicitation may be in the form of letters or attachments to email, phone logs, newspapers, websites, and trade papers, outreach events, etc. If using a log as supporting documentation, it must include:

- List the Solicitation Method
- Name of Submitter's Representative
- Name of Company Contacted
- Name of Person Contacted
- Company's Contact Information Used to Reach the Company (e.g. phone number, email)
- Date and Time of Contact

Details of the Communication

Within five (5) business days after bid submittal Submitter must complete and submit **Form EO2-100 Small Business Outreach Efforts and Bidders List** columns E, and F, documenting its diligent, earnest outreach efforts for subcontracting work as described in this clause.

5. Column E - Selection Decision

Indicate the Submitters selection decision for each small business that responded to the solicitation.

Whether or not a firm was selected.

If not selected, provide an explanation of why the firm was not selected.

If selected, indicate the Dollar Value.

6. Column F - Method of Communication of Final Selection Outcome

The Submitter must notify the final selection outcome to all small businesses that responded. The supporting documentation for this notification may be in the form of an email, letter, or a telephone log, etc. This documentation must show the following information regarding the final selection:

- Date firm was notified of outcome



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- Method used to communicate selection:
 - Email
 - Phone
 - Fax
 - Letter
 - In person

*Submitter must provide supporting documentation that shows Submitter has communicated its final selection decisions and outcomes to all DBEs and Small and/or Minority Businesses, including those not chosen to participate in this Contract.

C. Form EO3 – 100 DBE Utilization Commitment

Within five (5) business days after the bid submittal, the Submitter must complete, sign, date and submit EO3 – 100 DBE Utilization Commitment, which commits the Submitter to the City as follows:

1. The firms indicated as “Selected” on Form EO2 - 100- Small Business Outreach Efforts and Bidders List, will participate in this Contract;
2. The Submitter will comply with the Race- and Sex-Neutral post-award compliance requirements as stated in the DBE contract clause;
3. Submitter understands and agrees that any and all changes or substitutions to Subcontracts with DBEs and Small Businesses must be authorized by the EO Compliance Specialist prior to implementation; and
4. The following statement is true and correct: The proposed total participation of DBE, SBE, SBC firms on this contract will be designated on Form EO3 by the Submitter.

D. Open- Ended Participation Plan

Within five (5) business days after bid submittal, the Submitter must complete a DBE Open-Ended Participation Plan (OEPP). The OEPP must contain strategies to foster small business participation and information concerning the small businesses.

Every year on the anniversary date of the executed contract and/or at the start of every GMP (as applicable) the Contractor must provide the City with an updated OEPP detailing the Contractor’s continued commitment to utilizing DBEs. The OEPP must contain updated strategies to foster small business participation and information concerning the participation of small businesses, including any changes to the initial EO2-100 and EO3-100.

E. Failure to Submit Forms EO1-100, EO2-100, EO3-100 and the OEPP

Submittals that do not have these forms completed and signed, including the OEPP, will be deemed nonresponsive. A nonresponsive submittal will be disqualified from further evaluation.

F. Failure to Meet Outreach Requirements

The EOD Compliance Specialist will determine, in writing, whether the Submitter has satisfied all outreach requirements. If the EO Compliance Specialist determines the Submitter failed to satisfy the outreach requirements, then the EO Compliance Specialist may determine the submittal is nonresponsive. A determination of non-responsiveness *disqualifies* Submitters from further consideration for the Contract award. The City must send written notice to Submitter stating the basis for the EO Compliance Specialist’s decision.

G. Administrative Reconsideration

In the event the EOD determines the Submitter failed to submit required documentation to meet the Small Business Outreach Requirements, an opportunity for reconsideration of this determination will be provided. This opportunity for reconsideration will seek to obtain clarification of documentation submitted with the bid.



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Within seven (7) business days of being informed by the EOD that the Submitter is not responsive based on insufficient demonstration and/or documentation of Outreach Efforts, the Submitter may submit its written request to:

City of Phoenix Auditor or Designee
City Auditor Department
140 N. Third Avenue
Phoenix, AZ 85003
Phone: (602) 262-6641
Fax: (602) 534-1533
TTY: 7-1-1 Friendly

If the request for Administrative Reconsideration is not submitted within the allotted seven (7) business days, the non-responsive Submitter will not utilize the DBE Program submittal requirements as the basis for its future protest.

As part of this reconsideration process, the Submitter will have an opportunity to provide written clarification or argument concerning the issue of whether it met the Outreach Requirements or provided sufficient supporting and completed documentation of good faith efforts at the time of bid. The City Auditor or Designee will review solely the written clarification or argument, along with any document(s) originally submitted at the time of bid. No new or revised forms or supporting documentation will be reviewed for consideration.

The City Auditor or designee will send the Submitter a written decision on the reconsideration, explaining the basis for finding that the Submitter did or did not meet the DBE Outreach Requirements. The result of the reconsideration process is not administratively appealable and cannot be escalated or included in any other protest not related to the DBE Program.

SECTION IV. POST-AWARD GENERAL REQUIREMENTS

The City has implemented outreach efforts requirements for this Contract. Specifically, the Contractor must:

- (1) identify small-business-participation opportunities, including Commercially Useful Functions (CUF);
- (2) actively solicit proposals from small and minority businesses;
- (3) evaluate small-business proposals; and
- (4) communicate selection decisions to small and minority businesses, including each rejection of a small-business proposal.

A. Subcontracting Commitment

The Small Business Subcontractors identified and accepted in the Small Business Outreach documents must have an executed contract in place prior to the performance of work. Executed contracts and all lower tier contracts must contain the required Civil Rights Assurances and Prompt Payment provisions.

The Contractor will submit to the EOD, through the City of Phoenix Certification and Compliance System, all executed contracts, purchase orders, subleases, agreements, and other arrangements formalizing agreements between Contractor and all Subcontractors, upon execution throughout the life of this contract.

The Contractor will not terminate any approved or DBE Small Business Subcontracts, nor will the Contractor alter the scope of work or reduce the Subcontract amount, without the EO Compliance Specialist's prior written approval. Any request to alter a DBE Subcontract must be submitted in writing to the EO Compliance Specialist before any change is made. If the Contractor fails to do so, the City may declare the Contractor in breach of contract.

B. Counting Small Business Participation

The Contractor may only count expenditures for certified DBE Subcontractors that perform a Commercially Useful Function (CUF), in the NAICS Codes in which it is certified or verified in, on the contract. A DBE performs a CUF 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 CUF, the DBE must also be



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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 material itself. A DBE Subcontractor must perform or exercise responsibility for at least 30% of the total cost of its Subcontract value with its own workforce and equipment before its participation can be counted. DBEs must manage and control the performance of its contract and not be dependent on the prime's personnel and equipment to complete its work. Scope(s) of work not covered in the DBE firm's certification description **will not** be counted as DBE participation.

C. Commercially Useful Function (CUF) & Counting of DBE Trucking/Hauling:

49 CFR Part 26.55 Section (d) defines CUF and the counting of DBE participation Trucking/Hauling as follows:

- 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 achieving DBE participation.
- The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- 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.
- 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.
- 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 value of these hauling services.

D. Counting DBE Certified Manufacturers, Suppliers, and Brokers:

49 CFR Part 26.55 Section (e) permits the counting of expenditures with DBEs for materials or supplies toward DBE participation as provided in the following:

- If the materials or supplies are obtained from a **DBE manufacturer**, count 100 % of the cost of the materials or supplies toward DBE participation.
- If the materials or supplies are purchased from a **DBE regular dealer (supplier)**, count 60% of the cost of the materials or supplies, including transportation, toward DBE participation.
- If materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, **(packager, broker, or manufacturer's rep.)** count 40% of materials or supplies (including transportation costs toward DBE participation.

If an approved DBE allows its DBE certification to expire, or the certification is revoked during the course of the Subcontract, the City will consider all work performed by the DBE under the original contract to count as DBE participation. No increased scope of work negotiated after expiration or revocation of the DBE's certification may be counted. Any work performed under a Contract extension granted by the City may not be counted as DBE participation. If a DBE's certification is lost while under contract with a Contractor, solely because the DBE exceeded the size standard during the performance of the contract, the DBEs performance may count toward the contract goal. If a DBE is decertified because it was acquired by or merged with a non-DBE, the continued performance of the now non-DBE may not count toward the contract goal. If this negatively impacts the Contractor's ability to meet the contract goal, in good faith, the Contractor is strongly encouraged to Subcontract with other DBEs.

E. DBE Substitutions

If the DBE was approved by the EOD, the EOD Compliance Specialist will consider whether or not the Contractor has exercised diligent and good-faith efforts to find another DBE replacement. The Contractor will notify the EO Compliance Specialist in writing of the necessity to substitute a DBE and provide specific reason(s) for the substitution or replacement. Actual substitution or replacement of a DBE may not occur before the EO Compliance Specialist's written approval has been obtained.



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F. Relief from Proposed DBE Utilization

After Contract award, the EOD will not grant relief from the proposed DBE utilization except in extraordinary circumstances. The Contractor's request to modify Small Business participation must be in writing to the EO Compliance Specialist.

Contractor's written request must set forth the amount of relief sought, evidence that demonstrates why relief is necessary, and any additional relevant information that the EO Compliance Specialist should consider. The Contractor must include with the request all documentation of Contractor's attempts to Subcontract with the DBE and any other action taken to locate and solicit a replacement Small Business.

G. Prompt Payment of Subcontractors

The prompt payment clause must be included in every contract and Subcontract.

The Contractor must promptly pay its Subcontractors, subconsultants, subconsultants or suppliers. **For projects governed by 49 CFR, Part 26 payment must be made within five (5) calendar days** after the Contractor has received payment for scope of work completed by the Subcontractor. If the Contractor diverts any payment received for a DBE's work performed on the Contract or fails to reasonably account for the application or use of the payment, the City may declare the Contractor in breach of contract.

Under the prompt-payment provisions of 49 CFR Part 26, the Contractor must ensure prompt and full payment of retentions to Subcontractors and suppliers. The Contractor must pay each Subcontractor's and supplier's retention no later than 30 days the satisfactorily completion of and scope of work, and after the City has paid for the scope(s) of work. If the City reduces the Contractor's retention, the Contractor must correspondingly reduce the retentions of Subcontractors and suppliers that have performed satisfactory work.

Nothing in this section prevents the Contractor from enforcing its Subcontract with a Subcontractor or supplier for defective work, late performance, and other claims arising under the Subcontract.

SECTION V. RECORDS & REPORTING REQUIREMENTS

A. Records

During performance of the Contract, the Contractor must keep all records necessary to document DBE participation. The Contractor must provide the records to the EOD within 72 hours of the EOD's request and at final completion of the Contract. The EOD will prescribe the form, manner, and content of reports. The required records include:

1. All bidders' information to include firm's name; address; DBE or other status; race and sex information for the firm's majority owner; NAICS code(s) applicable to each scope of work the firm sought to perform in its bid; age of the firm; and the annual gross receipt of the firm.
2. A complete listing of all Subcontractors and suppliers on the project.
3. Each Subcontractor's and supplier's scope performed.
4. The dollar value of all Subcontracting work, services, and procurement.
5. Copies of all executed Subcontracts, purchase orders, invoices, and Subcontractor receipts.
6. Total operating expenses and total costs of goods sales.
7. Copies of all payment documentation and Change Orders.

B. Reports

Contractor is required to file the following payment reports in the City of Phoenix Certification and Compliance System:



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1. **Progress Payments:** By the 15th of ***each*** month, the Contractor must enter payment information and related supporting documentation into the City of Phoenix Certification and Compliance System.
 - a. The total of all payments received from the City during the previous month.
 - b. All payments made to Subcontractors during the previous month.
 - i. Supporting documentation to collaborate the payment amounts, which include but not limited to invoices and pay receipts.

The Contractor is responsible for ensuring that Subcontractors confirm receipt of payment in the City of Phoenix Certification and Compliance System by the end of each month.

2. **Final Payment:**

Before the City processes the Contractor's final payment and/or outstanding retention held against the Contractor, the Contractor must notate in the City of Phoenix Certification and Compliance System:

 - a. The payment to each Subcontractor is considered "Final".
 - b. Every Subcontractor must confirm they have received full and "Final" payment in the City of Phoenix Certification and Compliance System.

For federal reporting purposes, the Certification of Final Payment must be completed and signed by the Contractor and DBE firm(s). The Contractor is responsible for ensuring that Subcontractors confirm the receipt of full and "Final" payment in the Phoenix Contract Compliance System.

SUPPLEMENTARY CONDITIONS

1. STANDARD SPECIFICATIONS AND DETAILS

Except as otherwise required in these specifications, bid preparation and construction of this project will be in accordance with all applicable Maricopa Association of Governments' (MAG) Uniform Standard Specifications and Uniform Standard Details, latest revision, and the City of Phoenix Supplements, latest revision to the MAG Uniform Standard Specifications and Details.

2. PRECEDENCE OF CONTRACT DOCUMENTS

In case of a discrepancy or conflict, the precedence of contract documents is as follows:

1. Change Orders or Supplemental Agreements
2. Addenda
3. Contract Specifications/Special Provisions/Technical Provisions
4. The Plans
5. COP Supplement to MAG Standard Specifications and Details, latest revision
6. MAG Standard Specifications and Details, latest revision

The precedence of any Addenda falls within the category of which it represents.

3. PARTIAL PAYMENTS

The contracting agency will make a partial payment to the Contractor on the basis of an approved estimate prepared by the Engineer or the Contractor for work completed and accepted through the preceding month. The notice to proceed date, which is designated for the specific project involved, will be used as the closing date of each partial pay period. Payment will be made no later than fourteen (14) days after the work is certified and approved. City will review payment request and make recommendation of approval or denial within 7 calendar days. The contractor will attach to each monthly pay application the following documents:

- A. A completed and signed City of Phoenix Equal Opportunity Department DBE Utilization form.
- B. All current certified pay roll reports and statement of compliance (to be completed through the date of the pay application).
- C. Current record Drawings complete and current at the time of the monthly pay application. The contractor will review the most current Record Drawings with the Engineer at the time the payment application is submitted. If the Engineer determines that the Record Drawings are not complete, the Contractor will update the Record Drawings as directed, prior to re-submitting the monthly payment application.
- D. Certified quantity calculation to justify all pay quantities and amounts requested.
- E. A critical path method schedule monthly update report and compliance certificate.
- F. Failure to provide all of the completed documents as listed above will result in the Engineer returning the monthly pay application to the Contractor with no action.

4. MAG SUBSECTION 105.15(B) FINAL ACCEPTANCE

Delete this subsection and substitute the following:

B. Substantial Completion

The work may be judged substantially complete when all construction, including all applicable ADA requirements, has been completed with the possible exception of final inspection punch list work. The purpose of granting or acknowledging substantial completion is to stop Contract time. This is particularly important to the Contractor if Contract time is exhausted or nearly so and/or punch list work is anticipated to extend beyond the allotted time. Granting of substantial

completion will eliminate the possibility of incurring liquidated damages or additional liquidated damages beyond the substantial completion date, whichever case may apply.

In the event that the Engineer grants substantial completion, the Contractor will have thirty (30) days thereafter to complete punch list work, unless additional time is granted—in writing—by the Engineer. In no case will a Contractor be granted more than thirty (30) days to complete punch list work, unless there are extenuating circumstances such as delay in shipment of a specialized piece of equipment, labor strike, or other circumstances beyond the Contractor's control which would necessitate a further time extension.

C. Penalty for Failure to Complete Punch List Work Within Specified Time

In the event the Contractor fails to complete the punch list work within thirty (30) days following the Contract completion date, or in the case of specialized situations within the additional time allotted by the Engineer, the Contractor may be declared in default, and the Engineer may order the work completed by others.

In the event of default, as described herein, the Engineer will withhold from the Contractor's final payment, an amount equal to at least twice the estimated cost of the remaining work. In addition, the Engineer will withhold the retention deducted from Contract progress payments until all punch list work has been satisfactorily completed, whereupon twice the amount of the actual cost of completing the work will be deducted from the Contractor's final payment and the remaining funds, if any, including the Contract retention, will be released in accordance with the conditions set forth in Contract retention.

D. Contract Retention

This project will not be considered complete until all work has been completed, including punch list work. Under no circumstances will a Contractor receive any portion of the legally retained progress payments until the City has granted a final acceptance and/or acknowledged substantial completion. The following conditions will apply to each case:

1. Substantial Completion: The Engineer may reduce outstanding Contract retention to not less than one (1) percent of the total Contract amount, upon granting substantial completion, if the value of the punch list work is estimated to be less than one (1) percent of the total Contract.
2. Project Acceptance: Project acceptance implies that all punch list work is done and the improvements have been accepted by the City. Under these conditions, the retention will be fully released to the Contractor subject only to the signing of the standard claims affidavit and hold harmless clause required for all Contracts.
3. Final Release of Contract Retention and/or Release of More Than Ninety (90 Percent of the Contract Funds: Prior to final payment and release of monies retained and/or in the case of substantial completion where the Contractor has requested a reduction in Contract retention, the Contractor will be required to sign a claims affidavit agreeing to hold the City harmless from any and all claims arising out of the Contract.

5. DEFENSE AND INDEMNIFICATION

To the maximum extent allowed by law, including Title 34 A.R.S., Contractor ("Indemnitor") agrees to defend, indemnify, and hold harmless the City of Phoenix and its officers, officials (elected or appointed), agents and employees (and any jurisdiction or agency issuing permits for any work included in the project, and its officers, agents and employees) ("Indemnitee") from any and all claims, actions, liabilities, damages, losses or expenses, (including but not limited to court costs, attorney fees, expert fees, and costs of claim processing, investigation and litigation) of any nature or kind whatsoever ("Losses") caused or alleged to be caused, in whole or in part, by the wrongful, negligent or willful acts, or errors or omissions of Indemnitor or any of its owners, officers, directors, members, managers, agents, employees, or subcontractors (Indemnitor's Agents") arising out of or

in connection with this Contract. This defense and indemnity obligation includes holding Indemnitee harmless for any Losses or other amount arising out of or recovered under any state's workers' compensation law or arising out of the failure of Indemnitor or Indemnitor's Agents to conform to any federal, state or local law, statute, ordinance, rule, regulation, or court decree. Indemnitor's duty to defend Indemnitee accrues immediately at the time a claim is threatened or a claim is made against Indemnitee, whichever is first. Indemnitor's duty to defend exists regardless of whether Indemnitor is ultimately found liable. Indemnitor must indemnify Indemnitee from and against any and all Losses, except where it is proven that those Losses are solely as a result of Indemnitee's own negligent or willful acts or omissions. Indemnitor is responsible for primary loss investigation, defense and judgment costs where this indemnification applies. In consideration of the City's award of this Contract, Indemnitor agrees to waive all rights of subrogation against Indemnitee for losses arising from or related to any work performed by Indemnitor or Indemnitor's Agents for the City of Phoenix under this Contract. The obligations of Indemnitor under this provision survive the termination or expiration of this Contract.

6. CONTRACTOR'S INSURANCE

Contractor and Subcontractors must procure insurance against claims that may arise from or relate to performance of the work hereunder by Contractor and its agents, representatives, employees and Subcontractors. Contractor and Subcontractors must maintain that insurance until all of their obligations have been discharged, including any warranty periods under this Contract.

The City in no way warrants that the limits stated in this section are sufficient to protect the Contractor from liabilities that might arise out of the performance of the work under this Contract by the Contractor, its agents, representatives, employees, or Subcontractors and Contractor may purchase additional insurance as they determine necessary.

SCOPE AND LIMITS OF INSURANCE - Contractor must provide coverage with limits of liability not less than those stated below. An excess liability policy or umbrella liability policy may be used to meet the liability limits provided that (1) the coverage is written on a "following form" basis, and (2) all terms under each line of coverage below are met.

Commercial General Liability – Occurrence Form

General Aggregate	\$3,000,000
Products – Completed Operations Aggregate	\$3,000,000
Personal and Advertising Injury	\$3,000,000
Each Occurrence	\$3,000,000

- The policy must name the City of Phoenix as an additional insured with respect to liability for bodily injury, property damage and personal and advertising injury with respect to premises, ongoing operations, products and completed operations, and liability assumed under an insured contract arising out of the activities performed by, or on behalf of the Contractor, related to this Contract.
- Coverage must include XCU coverage.
- There must be no endorsement or modification which limits the scope of coverage or the policy limits available to the City of Phoenix as an additional insured.
- City of Phoenix is an additional insured to the full limits of liability purchased by the Contractor.
- The Contractor's insurance coverage must be primary and non-contributory with respect to any insurance or self-insurance carried by the City.
- Contractor's policies must be endorsed to provide an extension of the completed operations coverage for a period of nine years.
- Policy must not contain any restrictions of coverage with regard to operations on or near airport premises.

Automobile Liability

Bodily injury and property damage coverage for any owned, hired, and non-owned vehicles used in the performance of this Contract.

Combined Single Limit (CSL) \$3,000,000

- The policy must be endorsed to include The City of Phoenix as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Contractor, related to this contract.
- City of Phoenix is an additional insured to the full limits of liability purchased by the Contractor.
- The Contractor's insurance coverage must be primary and non-contributory with respect to any insurance or self-insurance carried by the City.
- Policy must not contain any restrictions of coverage with regard to operations on or near airport premises.

Worker's Compensation and Employers' Liability

Workers' Compensation Statutory

Employers' Liability

Each Accident	\$100,000
Disease – Each Employee	\$100,000
Disease – Policy Limit	\$500,000

- Policy must contain a waiver of subrogation against the City of Phoenix.
- This requirement does not apply when a contractor or Subcontractor is exempt under A.R.S. §23-902(E), **AND** when such contractor or Subcontractor executes the appropriate sole proprietor waiver form.

Builders' Risk Insurance

Policy provided, if determined necessary by the City, must be in an amount equal to the Job Order Agreement amount, plus additional coverage equal to JOA amount for all subsequent adjustments.

- The City of Phoenix, the Contractor and Subcontractors, must be named insureds on the policy.
- Special Causes of Loss coverage must be written on a replacement cost basis and must include coverage for soft costs, flood, and earth movement.
- Policy must be maintained until whichever of the following must first occur: (1) final payment has been made; or, (2) until no person or entity, other than the City of Phoenix, has an insurable interest in the property required to be covered.
- Policy must be endorsed such that the insurance must not be canceled or lapse because of any partial use or occupancy by the City.
- Policy must provide coverage from the time any covered property becomes the responsibility of the Contractor, and continue without interruption during construction, renovation, or installation, including any time during which the covered property is being transported to the construction installation site, or awaiting installation, whether on or off site.
- Policy must contain a waiver of subrogation against the City of Phoenix.

- Contractor is responsible for the payment of all policy deductibles.

Professional Liability (when required by Job Order Agreement)

Each Claim	\$1,000,000
Annual Aggregate	\$1,000,000

- The policy must cover liability arising from the failure to meet the professional standards required or expected in the delivery of those services as defined in the Scope of Services of this Contract.
- Contractor warrants that any retroactive date under the policy must precede the effective date of this Contract; and that either continuous coverage will be maintained, or an extended reporting period will be exercised for a period of two years beginning at the time work under this Contract is completed.
- Coverage must extend to job order types of contracts.

C. Notice of Cancellation

For each insurance policy required by the insurance provisions of this Contract, the Contractor must provide to the City, within five business days of receipt, a notice if a policy is suspended, voided or cancelled for any reason. Such notice must be mailed, emailed or hand delivered to City of Phoenix Design and Construction Procurement 200 W. Washington Street, 5th Floor, Phoenix, AZ 85003-1611.

D. Acceptability of Insurers

Insurance is to be placed with insurers duly licensed or authorized to do business in the state of Arizona and with an "A.M. Best" rating of not less than B+ VI. The City in no way warrants that the above-required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

E. Verification of Coverage

Contractor must furnish the City with certificates of insurance (ACORD form or equivalent approved by the City) as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

All certificates and any required endorsements are to be received and approved by the City before work commences. Each insurance policy required by this Contract must be in effect at or prior to commencement of work under this Contract and remain in effect for the duration of the project. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of contract.

All certificates required by this Contract must be sent directly to Design and Construction Procurement via email at str.title34.procure@phoenix.gov. The City project number, contract number and project description must be noted on the certificate of insurance. The City reserves the right to require complete, certified copies of all insurance policies required by this Contract at any time. DO NOT SEND CERTIFICATES OF INSURANCE TO THE CITY'S RISK MANAGEMENT DIVISION.

F. Subcontractors

Contractor's certificates must include all Subcontractors as additional insureds under its policies **OR** Contractor must be responsible for ensuring and verifying that all Subcontractors have valid and collectable insurance. At any time throughout the life of the contract, the City of Phoenix reserves the right to require proof from the Contractor that its Subcontractors have insurance coverage. All Subcontractors providing services included under this Contract's Scope of Services are subject to the insurance coverages identified above and must include the City of

Phoenix as an additional insured. In certain circumstances, the Contractor may, on behalf of its Subcontractors, waive a specific type of coverage or limit of liability where appropriate to the type of work being performed under the subcontract. Contractor assumes liability for all Subcontractors with respect to this Contract.

G. Approval

Any modification or variation from the insurance requirements in this Contract must be made by the Law Department, whose decision is final. Such action will not require a formal Contract amendment, but may be made by administrative action.

7. PERFORMANCE AND LABOR MATERIAL BOND

Prior to the execution of the Contract, the successful bidder must provide a performance bond and a labor and materials bond, each in an amount equal to the full amount of the Contract. Each such bond will be executed by a surety company or companies holding a Certificate of Authority to transact surety business in the state of Arizona, issued by the Director of the Arizona Department of Insurance. A copy of the Certificate of Authority will accompany the bonds. The Certificate will have been issued or updated within two years prior to the execution of the Contract. The bonds will be made payable and acceptable to the City of Phoenix. The bonds will be written or countersigned by an authorized representative of the surety who is either a resident of the state of Arizona or whose principal office is maintained in this state, as by law required, and the bonds will have attached thereto a certified copy of Power of Attorney of the signing official. The Power of Attorney it will be for the total Contract amount. Personal or individual bonds are not acceptable. **Failure to comply with these provisions will be cause for rejection of the bidder's proposal.**

8. BONDING COMPANIES

Prior to execution of each individual Job Order Agreement, the Contractor must provide a performance bond and a payment bond, each in an amount equal to the full amount of the agreed upon cost for that Job Order.

Each such bond will be executed by a surety company or companies holding a Certificate of Authority to transact surety business in the State of Arizona, issued by the Director of the Arizona Department of Insurance. A copy of the Certificate of Authority will accompany the bonds. The Certificate will have been issued or updated within two years prior to the execution of this Contract.

The bonds will be made payable and acceptable to the City of Phoenix.

The bonds will be written or countersigned by an authorized representative of the surety who is either a resident of the State of Arizona or whose principal office is maintained in Arizona, as by law required, and the bonds will have attached thereto a certified copy of Power of Attorney of the signing official.

If one Power of Attorney is submitted, it will be for twice the total amount required.

If two Powers of Attorney are submitted, each will be for the total amount required. Personal or individual bonds are not acceptable.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract Documents, the Contractor will promptly furnish a copy of the bonds or will permit a copy to be made.

All bonds submitted for this Project will be provided by a company which has been rated "A- or better for the prior four quarters" by the A.M. Best Company.

9. CONFIDENTIALITY OF PLANS & SPECIFICATIONS

Any plans generated for this project must include the following statement in the Title Block on every page: "Per City of Phoenix City Code Chapter 2, Section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of Contractor's contract with the City of Phoenix."

10. DATA CONFIDENTIALITY

As used in the Contract, "data" means all information, whether written or verbal, including plans, photographs, studies, investigations, audits, analyses, samples, reports, calculations, internal memos, meeting minutes, data field notes, work product, proposals, correspondence and any other similar documents or information prepared by, obtained by, or transmitted to the Contractor or its subcontractors in the performance of this Contract.

The parties agree that all data, regardless of form, including originals, images, and reproductions, prepared by, obtained by, or transmitted to the Contractor or its subcontractors in connection with the Contractor's or its subcontractor's performance of this Contract is confidential and proprietary information belonging to the City.

Except as specifically provided in this Contract, the Contractor or its subcontractors will not divulge data to any third party without prior written consent of the City. The Contractor or its subcontractors will not use the data for any purposes except to perform the services required under this Contract. These prohibitions will not apply to the following data provided the Contractor or its subcontractors have first given the required notice to the City:

- A. Data which was known to the Contractor or its subcontractors prior to its performance under this Contract unless such data was acquired in connection with work performed for the City;
- B. Data which was acquired by the Contractor or its subcontractors in its performance under this Contract and which was disclosed to the Contractor or its subcontractors by a third party, who to the best of the Contractor's or its subcontractor's knowledge and belief, had the legal right to make such disclosure and the Contractor or its subcontractors are not otherwise required to hold such data in confidence; or
- C. Data which is required to be disclosed by virtue of law, regulation, or court order, to which the Contractor or its subcontractors are subject.

In the event the Contractor or its subcontractors are required or requested to disclose data to a third party, or any other information to which the Contractor or its subcontractors became privy as a result of any other contract with the City, the Contractor will first notify the City as set forth in this section of the request or demand for the data. The Contractor or its subcontractors will give the City sufficient facts so that the City can be given an opportunity to first give its consent or take such action that the City may deem appropriate to protect such data or other information from disclosure.

The Contractor, unless prohibited by law, within ten calendar days after completion of services for a third party on real or personal property owned or leased by the City, the Contractor or its subcontractors will promptly deliver, as set forth in this section, a copy of all data to the City. All data will continue to be subject to the confidentiality agreements of this Contract.

The Contractor or its subcontractors assume all liability for maintaining the confidentiality of the data in its possession and agrees to compensate the City if any of the provisions of this section are violated by the Contractor, its employees, agents or subcontractors. Solely for the purposes of seeking injunctive relief, it is agreed that a breach of this section will be deemed to cause irreparable harm that justifies injunctive relief in court. Contractor agrees that the requirements of this Section will be incorporated into all subcontracts entered into by Contractor. A violation of this Section may result in immediate termination of this Contract without notice.

Personal Identifying Information-Data Security. Personal identifying information, financial account information, or restricted City information, whether electronic format or hard copy, must be secured and protected at all times. At a minimum, Contractor must encrypt and/or password protects

electronic files. This includes data saved to laptop computers, computerized devices or removable storage devices.

When personal identifying information, financial account information, or restricted City information, regardless of its format, is no longer necessary, the information must be redacted or destroyed through appropriate and secure methods that ensure the information cannot be viewed, accessed, or reconstructed.

In the event that data collected or obtained by Contractor or its subcontractors in connection with this Contract is believed to have been compromised, Contractor or its subcontractors will immediately notify the Project Manager and City Engineer. Contractor agrees to reimburse the City for any costs incurred by the City to investigate potential breaches of this data and, where applicable, the cost of notifying individuals who may be impacted by the breach.

Contractor agrees that the requirements of this Section will be incorporated into all subcontracts entered into by Contractor. It is further agreed that a violation of this Section will be deemed to cause irreparable harm that justifies injunctive relief in court. A violation of this Section may result in immediate termination of this Contract without notice.

The obligations of Contractor or its subcontractors under this Section will survive the termination of this Contract.

11. MATERIALS CONTAINING ASBESTOS

Materials containing asbestos and/or lead in any form are unacceptable to incorporate into the project unless formally accepted in writing by the City of Phoenix. This written approval will take place prior to the material being incorporated into the project and/or brought to the site.

Repair kits or touch-up materials, materials that include asbestos and /or lead introduced into the product at the factory or applied at the assembly plant are all unacceptable. Any and all field-applied products that are comprised of asbestos and/or lead containing materials are also unacceptable.

If asbestos and/or lead are installed without written approval by City of Phoenix, the contractor will remove these materials at his expense and dispose of these materials in accordance with all state and federal laws and pay for the supervision and reporting costs in addition to the cost to properly remove them. The Contractor is required to submit MSDS documents for newly installed materials.

During construction, if the Contractor discovered or suspected any materials containing asbestos in the field, the Contractor will inform the City of Phoenix immediately, who will be in charge of removing and disposing off all asbestos containing materials.

12. DISPOSAL OF SURPLUS MATERIAL WHICH DOES NOT CONTAIN ASBESTOS

All surplus and/or waste material may be disposed of at the Contractor's discretion subject to the following conditions:

- A. If the City landfills are used, the Contractor will pay the normal dumping fee.
- B. If private property within the City limits is used, the Contractor will obtain written permission from the property Owner and deliver a copy of this Agreement to the Engineer prior to any hauling or dumping. All disposal and grading will be in strict conformance with the City of Phoenix Grading and Drainage Ordinance. The Contractor will obtain and pay for the necessary permit(s).
- C. If the surplus material is disposed of outside the City limits, the Contractor will comply with all applicable laws/ordinances of the agency concerned and be responsible for all cost incurred.

No measurement or direct payment will be made for the hauling and disposal of surplus and/or waste material, the cost will be incidental to the cost of the project.

13. **HAUL PERMIT**

On any project, when the quantity of fill or excavation to be hauled exceeds 10,000 C.Y. or when the duration of the haul is for more than twenty (20) working days, the Contractor will:

- A. Obtain a written (no fee) haul permit from the Planning and Development Department.
- B. Obtain approval of the proposed haul route, number of trucks, etc., by the Street Transportation Department.

NOTE: Obtaining the haul permit and the approval by the Street Transportation Department does not release the Contractor from strict compliance with MAG Subsection 108.5, Limitation of Operations.

14. **DEFINITIONS – MAJOR ITEMS**

Section 101, page 8 of MAG Specifications – the definition of major item is changed to read:

Major Item: A major item is any bid item for work having an original dollar value equal to or greater than the amount shown below.

<u>Contract Amount</u>	Major Item is defined as any item equal to or <u>greater than the following</u>
Up to \$1 million	\$15,000 or 3%, whichever is greater
\$1 million to \$3 million	3% of the original Contract amount to a maximum of \$75,000.00
\$3 million to \$5 million	2.5% of the original Contract amount to a maximum of \$90,000.00
Over \$5 million	1.5% of the original Contract amount to a maximum of \$125,000.00

Contingency Items: Contingency items, which fall under the definition of a major item, are subject to negotiation if decreased by more than twenty (20) percent.

Contingency items will not increase more than twenty (20) percent without being subject to re-negotiation, regardless of the percentage of that item relative to the total Contract amount.

15. **UNDERGROUND FACILITIES**

The Contractor will make whatever investigation it deems necessary to verify the location of underground utility facilities. If such facilities are not in the location shown in the drawings, then (regardless of whether this is discovered prior to or during construction) the Contractor's remedies, if any, pursuant to Art. 6.3, Chapter 2, Title 40, A.R.S. (A.R.S. 40-360.21 through 40-360.32, "Underground Facilities"), will be the Contractor's sole remedy for extra work, delays, and disruption of the job, or any other claim based on the location of utility facilities. Locations of utility facilities shown on drawings furnished by the City are to be regarded as preliminary information only, subject to further investigation by the Contractor. The City does not warrant the accuracy of these locations, and the Contractor, by entering into this Contract, expressly waives and disclaims any claim or action against the City under any theory for damage resulting from location of utility facilities.

The Contractor will be responsible for obtaining all Blue Stake utility location information, and for performing all requirements as prescribed in A.R.S. 40-360.21 through .29, for all underground facilities, including those that have been installed on the current project, until the project is accepted by the City.

At least two working days prior to commencing any excavation, the Contractor will call the Blue Stake Center, between the hours of 7:00 a.m. and 4:30 p.m., Monday through Friday, for information relative to the location of buried utilities. The number to be called is as follows: Maricopa County, (602) 263-1100.

16. AUDIT AND RECORDS

Records of the Contractor's direct personnel payroll, bond expenses, and reimbursable expenses pertaining to this Project, and records of accounts between the City and Contractor will be kept on the basis of generally accepted accounting principles and must be made available to the City and its auditors for up to five years following Final Acceptance of the Project.

The City, its authorized representative, and/or any federal agency, reserves the right to audit the Contractor's records to verify the accuracy and appropriateness of all cost and pricing data, including data used to negotiate the Contract Documents and any change orders.

The City reserves the right to decrease Contract price and/or payments made on this Contract and/or request reimbursement from the Contractor following final contract payment on this Contract if, upon audit of the Contractor's records, the audit discloses the Contractor has provided false, misleading, or inaccurate cost and pricing data.

The Contractor will include a similar provision in all of its contracts with subcontractors and suppliers providing services or supplying materials under the Contract Documents to ensure the City, its authorized representative, and/or the appropriate federal agency, has access to the subcontractors' and suppliers' records to verify the accuracy of cost and pricing data.

The City reserves the right to decrease Contract price and/or payments made on this Contract and/or request reimbursement from the Contractor following final contract payment on this Contract if the above provision is not included in subcontractor and Supplier contracts, and one or more subcontractors or suppliers refuse to allow the City to audit their records to verify the accuracy and appropriateness of cost and pricing data.

If, following an audit of this Agreement, the audit discloses the Contractor has provided false, misleading, or inaccurate cost and pricing data, and the cost discrepancies exceed 1% of the total Agreement billings, the Contractor will be liable for reimbursement of the reasonable, actual cost of the audit.

17. CHANGE ORDER REQUEST MARKUPS AND WORKSHEET

The General Contractor will conform to the following markups for change order work self-performed or performed by a subcontractor. The General Contractor will also utilize the Change Order Request Summary Worksheet (see page S.C. – 16) to summarize change order costs. The General Contractor will still submit all required backup and supplemental information, calculations, invoices, etc., required to justify and support General Contractor and subcontractor costs.

A. General Contractor Self-Performed Work and Subcontractor Work Markups

Overhead and Profit – The actual or approved costs for equipment, material, and labor will be marked up by 12%.

B. General Contractor Markups of Subcontractor Work

The General Contractor will be allowed to markup actual or approved subcontractor costs for equipment, material, and labor (excluding subcontractor overhead and profit) by 7.5%.

C. Bond

The General Contractor will be allowed to markup the cost for change order work for payment and performance bonds utilizing the same percentage used on the initial Contract and will

submit verification of this percentage, from the bonding company, with the initial change order request.

D. Insurance

The General Contractor will be allowed to markup the cost for change order work plus Bond costs for property damage/public liability insurance, utilizing the same percentage used on the initial contract. Verification, from insurance carriers, of this percentage will be submitted with the initial change order request.

E. Sales Tax

The General Contractor will be allowed to markup the cost for change order work plus Bond and Insurance costs by the current, approved sales tax multiplier.

18. CONTROL OF WORK

Add the following to Uniform Standard Specifications for Public Works Construction (MAG), Section 105.1 AUTHORIZATION OF THE ENGINEER:

The City may, at its discretion and without cause, order the Contractor in writing to stop and suspend the Work. Immediately after receiving such notice, the Contractor will discontinue advancing the work specified under this Agreement. Such suspension will not exceed one hundred and eighty (180) consecutive Days during the duration of the Project.

The Contractor may seek an adjustment of the Contract Price and Time, if its cost or time to perform the Work has been adversely impacted by any suspension or stoppage of work by City.

19. COMMENCEMENT, PROSECUTION AND PROGRESS

Add the following to Uniform Standard Specifications for Public Works Construction (MAG), Section 108.10 FORFEITURE AND DEFAULT OF CONTRACT:

City's Right to Perform and Terminate for Cause:

If the City provides the Contractor with a written order to provide adequate maintenance of traffic, adequate cleanup, adequate dust control or to correct deficiencies or damage resulting from abnormal weather conditions, and the Contractor fails to comply in a time frame specified, the City may have work accomplished by other sources at the Contractor's expense.

If Contractor persistently fails to (i) provide a sufficient number of skilled workers, (ii) supply the materials required by the Contract Documents, (iii) comply with applicable Legal Requirements, (iv) timely pay, without cause, Sub-consultants and/or Subcontractors, (v) prosecute the Contract Services with promptness and diligence to ensure that the Contract Services are completed by the Contract Time, as such times may be adjusted, or (vi) perform material obligations under the Contract Documents, then City, in addition to any other rights and remedies provided in the Contract Documents or by law, will have the rights set forth below.

Upon the occurrence of an event set forth above, City may provide written notice to Contractor that it intends to terminate the Agreement unless the problem cited is cured, or commenced to be cured, within seven (7) Days of Contractor's receipt of such notice.

If Contractor fails to cure, or reasonably commence to cure, such problem, then City may give a second written notice to Contractor of its intent to terminate within an additional seven (7) Day period.

If Contractor, within such second seven (7) Day period, fails to cure, or reasonably commence to cure, such problem, then City may declare the Agreement terminated for default by providing written notice to Contractor of such declaration.

Upon declaring the Agreement terminated pursuant to the above, City may enter upon the premises and take possession, for the purpose of completing the Work, of all materials, equipment, scaffolds, tools, appliances and other items thereon, which have been purchased or provided for the performance of the Work, all of which Contractor hereby transfers, assigns and sets over to City for such purpose, and to employ any person or persons to complete the Work and provide all of the required labor, services, materials, equipment and other items.

In the event of such termination, Contractor will not be entitled to receive any further payments under the Contract Documents until the Work will be finally completed in accordance with the Contract Documents. At such time, the Contractor will only be entitled to be paid for Work performed and accepted by the City prior to its default.

If City's cost and expense of completing the Work exceeds the unpaid balance of the Contract Price, then Contractor will be obligated to pay the difference to City. Such costs and expense will include not only the cost of completing the Work, but also losses, damages, costs and expense, including attorneys' fees and expenses, incurred by City in connection with the re-procurement and defense of claims arising from Contractor's default.

20. DUST CONTROL & PREVENTION

To facilitate and encourage strict compliance with the Maricopa County Air Pollution Control Regulations pertaining to fugitive dust control, Contractor will submit the following documentation to the Project Manager at the preconstruction meeting prior to conducting any earth moving or dust generating activities under the Contract.

- a. Copy of a valid Maricopa County Earth Moving [Dust Control] Permit applicable to the work or services under the Contract.
- b. Copy of the Dust Control Plan applicable to the work or services under the Contract.
- c. Documentation that all of Contractor's on-site project managers have received the Comprehensive or Basic dust control training as required by Maricopa County Rule 310 based on project disturbed acres

For construction sites where 5-acres or more are disturbed, Contractor will designate and identify to the City an individual who has completed the dust control training set forth in Section 2 above as the site Dust Control Coordinator. The Dust Control Coordinator will be present on-site all times that earth moving or dust generating activities are occurring and until all ground surfaces at the site have been stabilized.

For construction sites less than 1-acre, the Contractor will designate an individual who has completed Basic Training to be on site at all times that earth moving or dust generating activities are occurring.

Contractor will notify the City of Phoenix, Aviation Department Project Manager within twenty-four (24) hours of any inspection, Notice of Violation, or other contact by the Maricopa County Air Quality Department with it or any of its subcontractors regarding the work or services under the Contract. A copy of any written communications, notices or citations issued to Contractor or any of its subcontractors regarding the work or services under the Contract will likewise be transmitted to the Project Manager within twenty-four (24) hours.

The Contractor will prevent any dust nuisance due to construction operations in accordance with MAG Specifications, Section 104.1.3, Cleanup and Dust Control. The Contractor will use a power pick-up broom as part of the dust control effort. No separate measurement or payment will be made for cleanup or dust control, or for providing a power pick-up broom on the job.

The Contractor may be instructed by the Engineer to provide additional pavement cleaning (in parking lots, or other locations) above and beyond the normal expected cleanup and dust control required by MAG Section 104.1.3. If requested by the Engineer, the Contractor will clean the requested areas with a power pick-up broom.

Use of the power pick-up broom in the special requested areas only, will be measured and paid for on an hourly basis under the bid item, 'POWER BROOM'. The number of hours listed in the bid proposal is only an estimate. Actual hours requested for this project may vary.

Contractor agrees to indemnify and reimburse the City for any fine, penalty, fee or monetary sanction imposed on the City by Maricopa County arising out of or caused by the performance of work or services under the Contract. Contractor will remit payment of the reimbursable sum to the City within thirty (30) days of being presented with a demand for payment from the City.

21. ARCHAEOLOGICAL MONITORING AND DISCOVERIES

Archaeological monitoring may be required within the limits of the project during construction. The Contractor must coordinate all ground disturbing work with the archaeologist(s) and provide a current work schedule to facilitate the archaeologist's investigation and monitoring of all ground disturbing work within the area(s) of interest. When archaeological materials are discovered, the Contractor must stop work immediately within a 10-meter zone of the discovery, secure the area, and immediately notify the on-site archaeologist(s) who must then contact the City Archaeology Office (602-495-0901) or the Street Transportation Environmental Section at 602-534-3747, who will coordinate with the City Archaeology Office. The Contractor must not recommence work in the area of discovery until directed in writing by the City Archaeology Office.

If suspected archaeological materials are discovered during construction without an archaeologist present, the Contractor must stop work immediately within a 10-meter zone of the discovery, secure the area, and immediately notify the City Archaeology Office (602-495-0901). The Contractor must not recommence work in the area of discovery until directed in writing by the City Archaeology Office.

In 1990, the Arizona legislature amended two state laws (Arizona Antiquities Act & State Historic Preservation Act) that protect human burials and associated artifacts on both private and state land. As specified in these laws and rephrased below:

1) A person shall not knowingly excavate in or upon any historic or prehistoric archaeological site, except when acting as a duly authorized agent of an institution or corporation organized for scientific, research or land use planning purposes. [Arizona Revised Statute §41-841(A) - Archaeological Discoveries] Any person, institution or corporation violating any provision of this article is guilty of a class 2 misdemeanor. [A.R.S. §41-846 - Violation]

2) A person who knowingly excavates in violation of A.R.S. §41-841 is guilty of a class 5 felony pursuant to Arizona Criminal Code- Title 13. A second or subsequent violation under this subsection is a class 3 felony. [A.R.S. §13-1507 - Excavating Certain Sites].

A class 5 felony carries potential penalties of up to two years in prison. If a City of Phoenix (City) project may impact historic or pre-historic archaeological resources, the guidelines described above must be adhered to. Therefore, no subsurface disturbance activities related to this without having an archaeological consultant on-site prior to and during this project's ground disturbance activities.

The City of Phoenix Office of the City Engineer is requesting that the Project Archaeological Requirements Acknowledgment Form is completed for all City sponsored or managed projects involving ground subsurface disturbance activities in areas that may include archaeological resources, as determined by the City of Phoenix Archaeology Office (CAO). If archaeological monitoring is required on a project, a City Archaeological Monitoring Acknowledgment form will be provided for your review and signature. The guidelines and the provisions in the Terms and Conditions of the Archaeological Monitoring Form must be followed as prescribed on the form and referenced above in this section. Penalties for non-compliance are detailed on the Archaeological

Monitoring Form. Failure to comply with the requirements of this acknowledgment form and the City contract may constitute a breach of contract.

22. LABOR COMPLIANCE

Davis Bacon and Related Acts. The prevailing basic hourly wage rates and fringes benefit payments, as determined by the Secretary of Labor pursuant to the provisions of the Davis Bacon Act, will be the minimum wages paid to the described classes of laborers and mechanics employed, or working on the site, to perform the Contract.

A Labor Standards Conference must be held prior to the start of construction. The Contractor will schedule the conference by calling the Labor Compliance Office at (602) 261-8287. Minimum attendance will be a corporate officer, who is authorized to execute and sign documents for the firm, and the payroll representative(s) responsible for preparing, reviewing and certifying weekly payroll reports. This requirement applies to all prime, sub and lower-tiered contractors expected to perform work on the project.

Payrolls, including subcontractor's payrolls, must be submitted weekly no later than seven days after each pay period ending date. The Contractor will upon request, clarify discrepancies between hourly wages paid individual workers and the minimum hourly wages required by the applicable federal wage decision for the project. Failure to provide payrolls or clarification of discrepancies may affect the timely release of payments and cause the withholding payment to the Contractor in accordance with Title 29, CFR Part 5.

29 CFR Parts 3, 5 and Wage Decision included in Labor Compliance (pages F.R. – 5 to 34 and G.W.D. – 1 to 9).

23. COMPLIANCE WITH FEDERAL LAWS

Contractor will comply with all existing and subsequently enacted federal, state and local laws, ordinances, codes, and regulations that are, or become applicable to this Agreement. If a subsequently enacted law imposes substantial additional costs on Contractor, a request for an amendment may be submitted. Contractor is also required to certify its compliance with specified laws and in some cases Contractor will pass along these requirements to its subcontractors. If any of Contractor's certifications is found to be false, the City may terminate this Contract or impose other remedies due to the false certification. If there is a conflict in interpretation between provisions in this Contract and stated Federal Provisions, the Federal Provisions will prevail.

CHANGE ORDER REQUEST SUMMARY WORKSHEET

Project: _____ COR# _____
 Project No. _____ Date: _____

1. Change Order Request Identification

2. Subcontractor Costs

Company	<u>Base Cost</u>	+	<u>12% OH & P</u>	=	<u>Total</u>
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
TOTAL			(2A)		

3. GC Markup of Subcontractor Base Costs (excluding OH & P)

TOTAL _____ (2A) x 0.075 = _____ (3A)

4. General Contractor Self-Performed Work

<u>Work Item</u>	<u>Base Cost</u>	+	<u>12% OH & P</u>	=	<u>Total</u>
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____
TOTAL					

5. Bond, Insurance, Sales Tax

(a) 2B + 3A + 4A	=		(5A)
(b) Bond Markup: (5A) x _____	=		(5B)
(c) Insurance Markup: (5A + 5B) x _____	=		(5C)
(d) Sales Tax Markup: (5A + 5B + 5C) x 0.05395	=		(5D)
(e) Extended General Conditions (if applicable)	=		(5E)

TOTAL CHANGE ORDER REQUEST (5A + 5B + 5C + 5D + 5E)

=

*Approved bond markup. **Approved insurance markup

SUPPLEMENTAL TERMS AND CONDITIONS TO ALL AIRPORT CONTRACTS

1. Applicability

These Supplemental Terms and Conditions to All Airport Contracts (Supplemental Terms) apply to all Airport Contracts to the extent applicable to the specific Contract.

Contractors and all subcontractors shall insert these Supplemental Terms in all subcontracts and subcontracts related to the Contract.

Contractor is responsible for compliance with these Supplemental Terms by any of its subcontractors, lower-tier subcontractors, and service providers.

2. Definitions

The following definitions apply to these Supplemental Terms. Unless otherwise stated, capitalized and uncapitalized terms shall have the same meaning. If any definition provided in this section conflicts with the Contract, the definition in these Supplemental Terms shall control solely to these Supplemental Terms.

2.1 "Airport" means Phoenix Sky Harbor International Airport, Phoenix Deer Valley Airport, and/or Phoenix Goodyear Airport, according to the context of the contract.

2.2 "Contract" means all City of Phoenix Aviation Department contracts, subcontracts, agreements, leases, subleases, licenses, permits, concessions, and other documents, however denominated, that grant or convey a right or privilege on an Airport and to which these Supplemental Terms are attached.

2.3 "Contractor" when not otherwise defined herein means all lessees, sublessees, licensees, permittees, consultants, concessionaires and other persons, firms, or corporations exercising a right or privilege on an Airport pursuant to a Contract and includes Contractor's heirs, personal representatives, successors, assigns, and subcontractors.

2.4 "Premises" means the area of an Airport occupied or used by Contractor pursuant to a Contract.

2.5 "Title VI List of Pertinent Nondiscrimination Acts and Authorities" or "Nondiscrimination Acts and Authorities" or "the Acts" or "the Regulations" means the non-exhaustive list of statutes and authorities, as may be amended or repealed, as defined in Section 3 below.

3. Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of this contract, 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:

3.1 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);

3.2 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);

3.3 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);

3.4 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);

3.5 The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq.*) (prohibits discrimination on the basis of age);

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

3.7 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);

3.8 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;

3.9 The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

3.10 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.*).

4. Federal Aviation Administration (FAA) Grant Assurances

4.1. General Civil Rights Provisions (49 U.S.C. § 47123) Used for Contracts, Lease Agreements, and Transfer Agreements

A. General Civil Rights Provisions: In all its activities within the scope of its airport program, 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.

1. Specific Clause that Is Used for General Contract Agreements:

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

2. Specific Clause that Is Used for Lease Agreements or Transfer Agreements:

If the Contractor transfers its obligation to another, the transferee is obligated in the same manner as the Contractor.

The above provision obligates the Contractor for the period during which the property is owned, used or possessed by the Contractor and the airport remains obligated to the Federal Aviation Administration.

4.2 Title VI of the Civil Rights Act of 1964 – Compliance with Nondiscrimination Requirements – 49 U.S.C. § 47123 and FAA Order 1400.11

During the performance of this Contract, Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “Contractor”), agrees as follows:

A. 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.

B. 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.

C. 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 Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

D. 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 City of Phoenix 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 City of Phoenix or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

E. Sanctions for Noncompliance. In the event of a Contractor's noncompliance with the nondiscrimination provisions of this contract, the City of Phoenix will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

1. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
2. Cancelling, terminating, or suspending a contract, in whole or in part.

F. 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 City of Phoenix 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 City of Phoenix to enter into any litigation to protect the interests of the City of Phoenix. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

4.3. Transfer of Real Property Acquired or Improved Under the Airport Improvement Program

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the City of Phoenix pursuant to the provisions of the Airport Improvement Program grant assurances:

A. The Contractor for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add “as a covenant running with the land”] that:

1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this Contract for a purpose for which a Federal Aviation Administration activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the Contractor will maintain and operate such facilities and services in compliance with all requirements imposed by the Nondiscrimination Acts and Regulations listed in the Title VI List of Pertinent Nondiscrimination Acts and Authorities (as may be amended) such that no person on the grounds of race, color, or national origin will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

B. With respect to licenses, leases, permits, etc., in the event of a breach of any of the above Nondiscrimination covenants, the City of Phoenix will have the right to terminate the contract and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the contract had never been made or issued.

C. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the City of Phoenix will have the right to enter or re-enter the lands and facilities thereon, and the above-described lands and facilities will there upon revert to and vest in and become the absolute property of the City of Phoenix and its assigns.

4.4 Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by the City of Phoenix pursuant to the provisions of the Airport Improvement Program grant assurances.

A. The grantee, licensee, lessee, permittee, or similarly situated person, as appropriate, for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the grantee, licensee, lessee, permittee, or similarly situated person will use the premises in compliance with all other requirements imposed by or pursuant to the Title VI List of Pertinent Nondiscrimination Acts and Authorities.

B. With respect to licenses, leases, permits, or other similar documents, in the event of breach of any of the above Non-discrimination covenants, the City of Phoenix will have the right to terminate the license, lease, permit, or other similar document and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said license, lease, permit, or other similar document had never been made or issued.

C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, the City of Phoenix will there upon revert to and vest in and become the absolute property of the City of Phoenix and its assigns.

4.5 Economic Nondiscrimination – 49 U.S.C. § 47107

In any Contract under which a right or privilege at the Airport is granted to a Contractor to conduct or to engage in any aeronautical activity for furnishing services to the public at the Airport, the Contractor shall:

A. Furnish its services on a reasonable, and not unjustly discriminatory, basis to all users of the Airport, and;

B. Charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the Contractor may be allowed to make reasonable and non-discriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

Non-compliance with this Section 4.5 shall be a material breach of this Contract for which the City of Phoenix shall have the right to terminate this Contract and any estate created herewith without liability therefor or, at the election of the City of Phoenix or the United States, shall have the right to judicially enforce said requirement.

4.6 Disadvantaged Business Enterprise (“DBE”) Requirements – 49 C.F.R. Part 26

A. Contract Assurance (49 CFR § 26.13). To the extent that this Contract is covered by 49 C.F.R. part 26, the Contractor agrees that this Contract is subject to the requirements of the U.S. Department of Transportation (DOT) regulations at 49 C.F.R. part 26.

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.

The Contractor agrees to include the foregoing statement in any subsequent contract that it enters into pursuant to this Contract and to cause any subcontractor to similarly include the statement in further subcontracts or sub-agreements.

B. Prompt Payment (§ 26.29). The Contractor agrees to pay each subcontractor under this Contract for satisfactory performance of its contract not later than seven (7) days from the receipt of each payment Contractor receives from City of Phoenix. The Contractor agrees further to return retainage payments to each subcontractor within seven (7) days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above-referenced time frame may occur only for good cause following written approval of the City of Phoenix. This clause applies to both DBE and non-DBE subcontractors.

4.7 Airport Concessions Disadvantaged Business Enterprise Requirements – 49 C.F.R. Part 23

A. Contract Assurance (§ 23.9). To the extent that this Contract is a concession agreement subject to the requirements of the U.S. Department of Transportation's regulations, 49 C.F.R. part 23, the concessionaire or Contractor agrees that it will not discriminate against any business owner because of the owner's race, color, national origin, or sex in connection with the award or performance of any concession agreement, management contract, or subcontract, purchase or lease agreement, or other agreement covered by 49 C.F.R. part 23. The concessionaire or Contractor agrees to include the above statements in any subsequent concession agreement or contract covered by 49 C.F.R. part 23 that it enters into pursuant to this Contract and to cause those businesses to similarly include the statements in further sub-agreements.

4.8 Miscellaneous

A. Contractor agrees that it will undertake an affirmative action plan in conformance with 14 C.F.R. part 152, subpart E (Nondiscrimination in Airport Aid Program), to ensure that no person shall on the grounds of race, creed, color, national origin, or sex be excluded from participating in any employment, contracting, or leasing activities covered in 14 C.F.R. part 152, subpart E. Contractor assures that no person will be excluded on such grounds from participating in or receiving the services or benefits of any program or activity covered by Subpart E. Contractor further agrees that it will require its covered suborganizations to provide assurances to Contractor that they similarly will undertake affirmative action programs and that they will require like assurances from their suborganizations as required by 14 C.F.R. part 152, subpart E.

B. City of Phoenix reserves the right to further develop, improve, repair, and alter the Airport and all roadways, parking areas, terminal facilities, landing areas, and taxiways, as it may reasonably see fit, free from any and all liability to Contractor for loss of business or damages of any nature whatsoever occasioned during the making of such improvements, repairs, alterations, and additions.

C. The City of Phoenix reserves the right, but is not obligated to Contractor, to maintain and keep in repair the landing area of the Airport and all publicly-owned facilities of the Airport, together with the right to direct and control all activities of Contractor in this regard.

D. Contractor acknowledges that this Contract is subordinate to any existing or future agreement between the City of Phoenix and the United States concerning the development, operation, or maintenance of the Airport. If the FAA or its successors require modifications or changes in the Contract as a condition to obtaining funds for improvements at the Airport or as a requirement of any prior grants, Contractor hereby consents to any and all such modifications and changes as may be reasonably required and agrees that it will adopt any such modifications and changes as part of this Contract.

E. This Contract is subordinate to the reserved right of the City of Phoenix and its successors and assigns to occupy and use for the benefit of the public the airspace above the Premises for the right of flight for the passage of aircraft. This public right of flight includes the right to cause in the airspace any noise inherent in the operation of any aircraft through the airspace or in landing at, taking off from, or operating at an Airport.

F. Contractor agrees to comply with the notification and review requirements, as required by 14 C.F.R. part 77 (Safe, Efficient Use, and Preservation of the Navigable Airspace), if future construction of a structure is planned for the Premises or a planned modification of a structure on the Premises. Contractor shall submit the required FAA Form 7460-1 (Notice of Proposed Construction or Alteration) and provide documentation showing compliance with the federal requirements. After the FAA has completed the aeronautical study, Contractor shall provide to the City of Phoenix the FAA determination letter on proposed construction and any impact to air navigation. Contractor covenants for itself and its successors and assigns that it will not erect or permit the erection of any structure or permit the growth of any tree on the Premises above the mean sea level elevation for (1) Phoenix Sky Harbor International Airport, 1,134 feet, (2) Phoenix Goodyear Airport, 968 feet, and (3) Phoenix Deer Valley Airport, 1,476 feet. As a remedy for the breach of the covenant, the City of Phoenix reserves the right to enter the Premises and remove the offending structure or cut the offending tree at Contractor's expense.

G. Contractor, by accepting this Contract, covenants for itself and its successors and assigns, that no use will be made of the Premises that might in any manner interfere with the landing and taking off of aircraft from the Airport or otherwise constitute a hazard to air navigation. As a remedy for the breach of the covenant, the City of Phoenix reserves the right to enter the Premises and abate the interference at Contractor's expense.

H. Contractor agrees that nothing in this Contract may be construed to grant or authorize the granting of an exclusive right within the meaning of 49 U.S.C. § 40103(e) (No exclusive rights at certain facilities).

I. This Contract is subordinate to whatever rights the United States now has or in the future may acquire affecting the control, operation, regulation, and taking-over of the Airport or the exclusive or non-exclusive use of the Airport by the United States during a time of war or national emergency.

J. If this Contract involves construction, Contractor shall carry out the project in accordance with FAA airport design, construction, and equipment standards and specifications current on the date of project approval.

K. Contractor is encouraged to use fuel and energy conservation practices.

5. Immigration Reform and Control Act of 1986 (IRCA)

Contractor agrees that IRCA (Public Law 99-603) applies to it. Contractor shall comply with the provisions of IRCA as it applies to its activities under this Contract and to permit the City of Phoenix to inspect its personnel records to verify its compliance.

6. Conflict of Interest

Contractor agrees that the City of Phoenix may cancel this Contract pursuant to Arizona Revised Statutes (A.R.S.) § 38-511 (Cancellation of political subdivision and state contracts).

7. Legal Worker Requirements

7.1 The City of Phoenix is prohibited by A.R.S. § 41-4401 from awarding an agreement to any contractor who fails, or whose subcontractors fail, to comply with A.R.S. § 23-214(A) (Verification of employment eligibility; E-Verify program). Therefore, Contractor agrees that:

A. Contractor and each subcontractor it uses warrants their compliance with all federal immigration laws and regulations that relate to their employees and their compliance with A.R.S. § 23-214(A).

B. A breach of warranty under paragraph A above shall be deemed a material breach of this Contract and is subject to penalties up to and including termination of the Contract.

C. The City of Phoenix retains the legal right to inspect the papers of Contractor or its subcontractor employees who work on this Contract to ensure that Contractor or its subcontractors are complying with the warranty under paragraph A above.

8. City of Phoenix Equal Employment Opportunity Requirements

8.1 If Contractor is by this Contract a supplier to or lessee of the City of Phoenix, then the requirements of the Phoenix City Code, Chapter 18, Article V apply, including the agreement that:

“Any supplier/lessee in performing under this contract shall not discriminate against any worker, employee or applicant, or any member of the public, because of race, color, religion, sex, national origin, age, or disability, nor otherwise commit an unfair employment practice. The supplier and/or lessee shall ensure that applicants are employed, and employees are dealt with during employment without regard to their race, color, religion, sex, national origin, age, or disability, and shall adhere to a policy to pay equal compensation to men and women who perform jobs that require

substantially equal skill, effort, and responsibility, and that are performed within the same establishment under similar working conditions. Such action shall include but not be limited to the following: employment, promotion, 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 supplier further agrees that this clause will be incorporated in all subcontracts with all labor organizations furnishing skilled, unskilled and union labor, or who may perform any such labor or services in connection with this contract.”

Supplier/lessee further agrees that this clause will be incorporated in all subcontracts, job-consultant agreements or subleases of this contract entered into by supplier/lessee.

If the supplier/lessee employs more than 35 employees, the following language shall be included as the last paragraph to the clause above:

“The supplier/lessee further agrees not to discriminate against any worker, employee or applicant, or any member of the public, because of sexual orientation or gender identity or expression and shall ensure that applicants are employed, and employees are dealt with during employment without regard to their sexual orientation or gender identity or expression.”

8.2 Documentation. Suppliers and lessees may be required to provide additional documentation to the City of Phoenix’s Equal Opportunity Department affirming that a nondiscriminatory policy is being utilized.

8.3 Monitoring. The City of Phoenix’s Equal Opportunity Department shall monitor the employment policies and practices of suppliers and lessees subject to this Section 8 as deemed necessary. The Equal Opportunity Department is authorized to conduct on-site compliance reviews of selected firms, which may include an audit of personnel and payroll records, if necessary.

9. Contractor Requirements for the Mitigation of Heat-Related Illnesses and Injuries in the Workplace, Phoenix City Code Sec. 18-411

9.1 Any Contractor whose employees and contract workers perform work in an outdoor environment under this contract must keep on file a written heat safety plan. The City of Phoenix may request a copy of this plan and documentation of all heat safety and mitigation efforts currently implemented to prevent heat-related illnesses and injuries in the workplace. The plan must also be posted in English and Spanish on a bulletin board in a break room where it is accessible to employees. If a Contractor does not have a break room, the heat safety plan must be physically placed in a conspicuous location in the workplace where notices to employees are customarily posted. The heat safety plan must also include a contact number of the Contractor that all employees and contract workers can call if they need to inquire or report any heat safety issues. At a minimum,

the heat safety and mitigation plan and documentation required under this provision shall include each of the following as it relates to heat safety and mitigation:

- A.** Availability of sanitized cool drinking water free of charge at locations that are accessible to all employees and contract workers.
- B.** Ability to take regular and necessary breaks as needed and additional breaks for hydration.
- C.** Access to shaded areas and/or air conditioning.
- D.** Access to air conditioning in vehicles with enclosed cabs. All such vehicles must contain functioning air conditioning by no later than May 1, 2025.
- E.** Effective acclimatization practices to promote the physiological adaptations of employees or contract workers newly assigned or reassigned to work in an outside environment.
- F.** Conduct training and make it available and understandable to all employees and contract workers on heat illness and injury that focuses on the environmental and personal risk factors, prevention, how to recognize and report signs and symptoms of heat illness and injury, how to administer appropriate first aid measures and how to report heat illness and injury to emergency medical personnel.
- G.** The Contractor further agrees that this clause will be incorporated in all subcontracts with subcontractors, sublicensees or sublessees who may perform labor or services in connection with this Contract. Additionally, the Contractor agrees to require all subcontractors, sublicensees or sublessees to include this clause in all contracts with any third party who is contracted to perform labor or services in connection with this Contract. It is the obligation of the Contractor to ensure compliance by its subcontractors.

Revised 9/2/2025

COMPLIANCE WITH ENVIRONMENTAL LAWS

Contractor shall, at Contractor's expense, comply with all current and future Environmental Laws to the extent that they apply to Contractor's use or occupancy of the Premises or the Airport. If Contractor has any question about its obligations under this Exhibit, then Contractor may contact the City of Phoenix Aviation Department's Planning and Environmental Division for information, but not legal advice.

1. Definitions

1.1 *Airport* means Phoenix Sky Harbor International Airport, Phoenix Deer Valley Airport, or Phoenix Goodyear Airport according to the context of this Contract.

1.2 *Contract* means the lease, license, permit, or other agreement to which this Exhibit is attached.

1.3 *Contractor* means each person and entity that is a named party to this Contract.

1.4 *Contractor's Agents* means all persons under Contractor's direction or control, including Contractor's officers, managers, employees, heirs, personal representatives, invitees, volunteers, guests, successors, and assigns.

1.5 *Premises* means the area of the Airport or other City-owned property used or occupied by Contractor pursuant to this Contract or where Contractor causes or contributes to a Release of a Regulated Substance.

1.6 *Environmental Laws* means all current and future federal, state, and local laws, rules, regulations, and ordinances as clarified by advisory circulars or guidance documents, promulgated to protect the public health or the environment, including the following, as they may hereafter be amended or supplemented:

A. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601-9628, as amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA), Pub. Law No. 99-499.

B. Solid Waste Disposal Act (SWDA), 42 U.S.C. §§ 6901-6992k, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), Pub. Law No. 94-580, including the Regulations of Underground Storage Tanks, 42 U.S.C. §§ 6991-6991m.

C. Toxic Substances Control Act of 1976 (TSCA), 15 U.S.C. §§ 2601-2629.

D. Public Health Service Act, 42 U.S.C., Chapter 6A, and Safe Drinking Water Act (SDWA), 42 U.S.C. §§ 300f-300j-27, and the amendments thereto.

E. Federal Water Pollution Control Act of 1948 (FWPCA), as amended by the Clean Water Act, 33 U.S.C. §§ 1251-1388.

F. Clean Air Act, 42 U.S.C. §§ 7401-7515.

G. Title 49 of the Arizona Revised Statutes, A.R.S. §§ 49-101 to 49-1408, including the Arizona Environmental Quality Act, A.R.S. §§ 49-101 to 49-192.01.

H. Arizona Comprehensive Air Quality Act, A.R.S. §§ 49-401 to 49-593.

I. Arizona Solid Waste Management Act, A.R.S. §§ 49-701 to 49-881.

J. Arizona Hazardous Waste Management Act, A.R.S. §§ 49-901 to 49-973.

K. Arizona Underground Storage Tank Regulation Act, A.R.S. §§ 49-1001 to 49-1093.

L. Occupational Safety and Health Act of 1970, Pub. Law No. 91-596, as amended by 29 U.S.C. §§ 651-678.

M. Chapter 28 and Chapter 32C of the Phoenix City Code and City of Phoenix Aviation Department Rule and Regulations, including R&R 01-02 (Storm Water Enforcement).

N. National Environmental Policy Act (NEPA), Pub. Law. No. 91-190, and all FAA-approved NEPA documents.

O. Endangered Species Act, 16 U.S.C. §§ 1531-1544.

P. Arizona Antiquities Act, A.R.S. §§ 41-841 to 41-847.

Q. Migratory Bird Treaty Act, 16 U.S.C. §§ 703-712.

R. AZPDES General Permit for Stormwater Discharges Associated with Construction Activity to Protected Surface Waters (AZG2020-001 CGP and AZG2025-001 CGP) (AZPDES Construction General Permit); AZPDES General Permit for Point Source Discharges from the Application of Pesticides to Protected Surface Waters (AZG2021-003) (AZPDES Pesticide General Permit); and AZPDES General Permit for Stormwater Discharges Associated with Industrial Activity to Protected Surface Waters (AZMSG2024-001) (AZPDES Multi-Sector General Permit) or, in the event that any of the foregoing AZPDES permits are expired, the version of the AZPDES General Permit currently in effect.

S. Interstate Conveyance Sanitation, 21 C.F.R. Part 1250.

T. Maricopa County Air Quality Department Rule 310 (Fugitive Dust from Dust-Generating Operations) and Rule 310.01 (Fugitive Dust from Non-Traditional Sources of Fugitive Dust).

U. All current and future federal, state, and local laws, rules, regulations, and ordinances promulgated under the foregoing Environmental Laws that provide for the protection of the public health or the environment, including the ambient air, groundwater, surface water, land use, and substrata soils.

1.7 *Regulated Substances* means:

A. The substances identified or listed as a hazardous substance, pollutant, hazardous material, and petroleum in CERCLA; Hazardous Materials Transportation Act, 49 U.S.C. §§ 5101-5128; RCRA; Arizona Regulation of Underground Storage Tanks; Clean Air Act; and all rules and regulations promulgated to implement these Environmental Laws.

B. The substances identified or listed as a hazardous substance, pollutant, toxic pollutant, petroleum, or hazardous, special, or solid waste in the Arizona Environmental Quality Act, including the Water Quality Assurance Revolving Fund Act (WQARF), A.R.S. §§ 49-281 to 49-298; Arizona Comprehensive Air Quality Act; Arizona Solid Waste Management Act; Arizona Underground Storage Tank Regulation Act; Arizona Management of Special Waste Act; Arizona Hazardous Waste Management Act; and all rules and regulations promulgated to implement these Environmental Laws.

C. All substances, materials, and wastes that are or hereafter become regulated or that are classified as hazardous or toxic under any Environmental Law, including building materials that may contain any hazardous substance and its disturbance is subject to any Environmental Law. If a building material, including pavements and paint, will be disturbed by Contractor and the building material is not unpainted wood, metal, or glass, then Contractor shall employ an Asbestos Hazard Emergency Response Act (AHERA)-certified inspector, who shall comply with advance survey and testing requirements and the following rules, as applicable:

(i) 40 C.F.R. Part 61 (National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart M (National Emission Standards for Asbestos)).

(ii) Maricopa County Air Pollution Control Regulations: National Emission Standard for Asbestos Regulation III Maricopa County Air Quality Department (MCAQD) Rule 370, § 301.9 - subpart M

(iii) To the extent required by Environmental Law, NESHAP Notification Form and Delivery Requirement. A NESHAP Notification Form shall be completed and postmarked or delivered to the MCAQD Asbestos NESHAP Coordinator at least ten (10) days before disturbing any building material even if no asbestos is present.

(iv) 29 C.F.R. Part 1926 (OSHA Safety and Health Regulations for Construction).

(v) RCRA waste determination and proper handling, transport, and disposal.

1.8 *Release* means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, disposing of a Regulated Substance.

2. Compliance

2.1 Contractor shall not cause or allow any Regulated Substance to be used, generated, manufactured, produced, stored, brought upon, Released on or under, or transported to or from the Premises by Contractor or Contractor's Agents in a manner that constitutes or would foreseeably result in a violation of any Environmental Law or that would give rise to liability under any Environmental Law.

2.2 Contractor may remediate any Release of a Regulated Substance under Chapter 28 of the Phoenix City Code (the City's pretreatment ordinances), under such other ordinances as may be promulgated by the City, and applicable Environmental Laws, including the Clean Water Act to the extent it applies.

2.3 Contractor (Indemnitor) must defend, indemnify, and hold harmless the City of Phoenix and its officers, officials, (elected and appointed), agents, and employees (Indemnatee) from and against any and all demands, claims, complaints, losses, damages, actions or causes of action, assessments, liabilities, costs or expenses, including interest, penalties, and reasonable attorney fees, expert witness fees, and reasonable expenses of investigation and remedial work, (including investigations and remediation by engineers, environmental consultants, and similar technical personnel) asserted against or imposed upon or incurred by Indemnatee arising in connection with, or resulting from, any violation of Environmental Law, including any use, generation, storage, spill, Release, discharge, or disposal of any Hazardous Substance that is now or comes to be located on, at, about, or under the Premises or because of, or in connection with, the violation of any Environmental Law (hereinafter collectively referred to as "Losses") to the extent that such Losses are caused by the fault of Indemnitor or its officers, officials, members, managers, agents, employees, contractors, volunteers, tenants, subtenants, invitees, or licensees (collectively, "Indemnitor's Parties"). Indemnitor's duty to defend Indemnatee accrues immediately at the time a claim is threatened or a claim is made against Indemnatee, whichever occurs first. Indemnitor's duty to defend exists whenever it is alleged that either the Indemnitor and/or one or more of the Indemnitor's Parties, or both, is/are liable, regardless of whether they are ultimately found liable. As used in the section, (a) Hazardous Substance are the Regulated Substances and other substances defined as toxic or hazardous substances, pollutants, or wastes by any Environmental Law and the following substances: gasoline, kerosene, or other petroleum products, toxic pesticides and herbicides, volatile solvents, materials containing asbestos or formaldehyde, and radioactive materials; (b) "Environmental Law" has the meaning prescribed above; (c) "Fault" means those nonculpable acts and omissions giving rise to strict liability under any Environmental Law pertaining to

Hazardous Substances, as well as culpable conduct (negligence or willful misconduct). In consideration of the award of this Contract, Indemnitor agrees to waive all rights of subrogation against the City and its officers, officials, (elected and appointed), agents, and employees for losses arising out of or related to this Contract. The obligations of Indemnitor under this provision shall survive the expiration or earlier termination of this Contract.

2.4 To the extent Contractor or Contractor's Agents Release any Regulated Substance in violation of Environmental Law on or under the Premises, or to the air, groundwater, or surface waters on or adjacent to the Premises, then Contractor shall, at its expense, promptly take all actions that are necessary or appropriate to remediate the Release and mitigate any threat to the public health or the environment consistent with Environmental Law. Subject to the City's prior written consent, Contractor shall undertake all remedial actions that are necessary to return the contaminated area to the condition that existed immediately prior to the Release or, if such prior condition is unknown, to such condition as is acceptable to the governmental agency with jurisdiction. Contractor shall undertake its remedial actions under this Section 2.4 without regard to the potential liability of Contractor or any other person. However, remedial actions undertaken by Contractor shall not impair Contractor's rights, if any, to seek contribution or indemnity from any other responsible party.

2.5 Contractor shall, at its expense, prepare all tests, reports, and studies and provide all information to any appropriate governmental agency that is required pursuant to any Environmental Law as a result of Contractor's use or occupancy of the Premises. Contractor's obligation includes any requirement under Environmental Law for a site characterization, site assessment, and/or remediation plan that may be necessary due to any actual or potential Releases of a Regulated Substances by Contractor or Contractor's Agents on, under, or from the Premises, or to the air, groundwater, or surface waters on or adjacent to the Premises during the Term of this Contract and during the time Contractor has possession of the Premises. Contractor shall, at its expense, promptly (A) provide all information requested by the City related to the applicability of the Environmental Laws to the Premises, (B) respond to any governmental investigation pursuant to Environmental Laws regarding the Premises, and (3) respond to any claim of liability by third parties that relate to any Release of a Regulated Substance by the Contractor or Contractor's Agents on the Premises or the Airport.

2.6 After giving Contractor at least thirty (30) days prior notice, the City may inspect and copy all of Contractor's records, test results, studies, and other documents, not protected by attorney-client privilege, regarding environmental conditions related to the use, storage, or treatment of any Regulated Substance on, under, or from the Premises.

2.7 Contractor shall promptly notify the City in writing upon the occurrence of any of the following:

A. Contractor receives any correspondence or communication from any governmental agency regarding the application or enforcement of any Environmental Law to the Premises or to Contractor's use or occupancy of the Premises.

B. There is any change in Contractor's activities on the Premises that changes or may change Contractor's or the City's obligations or liabilities under any Environmental Law.

C. Any person or entity asserts any claim or any other event occurs for which Contractor may incur an obligation under this Exhibit.

2.8 Contractor shall, at its expense, obtain and comply with all permits and approvals that are, or may become, required as result of Contractor's use or occupancy of the Premises.

2.9 Contractor shall include the provisions of this Exhibit in all agreements and contracts by which it grants a right or privilege to any person or entity under this Contract.

2.10 Contractor shall obtain and maintain compliance with all applicable financial responsibility requirements of all Environmental Laws regarding the ownership or operation of any underground storage tank or other device used to treat or store a Regulated Substance and upon request present evidence thereof to the City.

2.11 Contractor shall take reasonable precautions to prevent persons not acting under Contractor's or Airport's authority, direction, or control from conducting any activity on the Premises that may result in the Release of a Regulated Substance on, under, or from the Premises or to the air, groundwater, or surface waters on or adjacent to the Premises. Contractor shall exercise due care with respect to any Regulated Substance that is located on the Premises as a result of any action of any person who is not under Contractor's authority, direction, or control.

2.12 Contractor shall use its best efforts to minimize its production of a waste stream that includes Regulated Substances, and Contractor shall minimize the storage of Regulated Substances on, in, and around the Premises.

3. Breach and Termination

Subject to the terms and conditions of this Section, Contractor's failure to comply with any requirement or obligation of this Exhibit or any applicable Environmental Law is a default under this Contract. Contractor's failure to cure its default after being provided with notice thereof and a reasonable opportunity to cure, as provided in this Contract, shall constitute a material breach of this Contract. Upon a breach that is not timely cured as provided in this Contract, the City may pursue any and all remedies available under this Contract and all applicable federal, state, and local laws, including the following:

3.1 Without termination of this Contract, the City may enforce all its rights and remedies under this Contract, including, without limitation, any or all the following:

A. The right to file an action or proceeding seeking to recover rent, fees, and other amounts due and that become due under this Contract.

B. The right to recover interest at the rate of 18% per annum on all accrued, but unpaid, rents, fees, and other amounts due calculated from the date the amount was due pursuant to § 4-7 of the Phoenix City Code.

C. The right to file an action or proceeding seeking to recover possession of the Premises.

D. The right to make payments and to perform obligations required of Contractor under this Contract and to be reimbursed by Contractor for the costs thereof, including all attorney fees, expert fees, and other cost incurred by the City.

E. The City may terminate this Contract.

F. The City may exercise the right of “self-help” or similar remedy in order to minimize any damage, expense, penalty, and related fees or costs arising out of or related to the violation of any Environmental Law related to the Premises.

G. By exercising its rights under this Section, the City does not, and may not be construed as, releasing Contractor from any obligation it would otherwise have under this Exhibit or any applicable Environmental Law.

H. The covenants of this Exhibit shall survive the termination of this Contract.

If this Contract does not require Contractor to perform any activity on the Airport or other City-owned property, then the following stormwater provisions do not apply to Contractor or this Contract.

4. AZPDES Stormwater General Permit and Phoenix City Code Chapter 32C Compliance

4.1 Contractor shall comply with the City’s AZPDES Stormwater General Permit and Aviation Department R&R 01-02 (Storm Water Enforcement). Except for discharges on Indian land, stormwater discharges in Arizona are regulated by the Arizona Department of Environmental Quality (ADEQ) through the Arizona Pollutant Discharge Elimination System (AZPDES) program. An AZPDES permit is required for any point source discharge of pollutants to waters of the United States. Because stormwater runoff can transport pollutants to either a municipal separate storm sewer system (MS4) or to waters of the United States, AZPDES permits are required for stormwater discharges.

4.2 The City and Contractor are required to obtain the current version of AZPDES general permit coverage as required by AZPDES regulations and to the extent that covered stormwater is discharged from the Premises. Coverage under the AZPDES General Permit for Stormwater Discharges Associated with Construction Activity to Protected Surface Waters (AZG2020-001 and AZG2025-001) (AZPDES Construction General Permit) is required for stormwater discharges generated by construction activities. Coverage under the AZPDES General Permit for Point Source Discharges from the Application of Pesticides to Protected Surface Waters (AZG2021-003) (AZPDES

Pesticide General Permit) is required for certain applications of pesticides. Coverage under the AZPDES General Permit for Stormwater Discharges Associated with Industrial Activity to Protected Surface Waters (AZMSG2024-001) (AZPDES Multi-Sector General Permit) is required for stormwater discharges generated by facilities and operations engaged in certain industrial activities. Among these industries are those engaged in certain activities within the air transportation and associated activities.

4.3 The City has obtained coverage under the AZPDES Multi-Sector General Permit for its air transportation facilities at the Airports. The City has adopted Stormwater Quality Protection ordinances (Phoenix City Code Chapter 32C) and has in place an Aviation Department Stormwater Enforcement Procedures and Civil Penalty Policy (Aviation Stormwater Policy), both of which were developed to comply with Environmental Laws governing stormwater pollution.

4.4 The City adopted the Aviation Stormwater Policy to achieve compliance with the AZPDES program requirements by the Aviation Department and its contractors and permittees. Contractor is subject to the Aviation Stormwater Policy as a condition to its use or occupancy of the Premises or any part of the Airports. The City has the right to monitor Contractor's activities on the Premises and the Airport and enforce Contractor's compliance with the Aviation Stormwater Policy. The City will provide reasonable advance notice to the Contractor ahead of monitoring and audit activities.

4.5 Contractor shall comply with the Aviation Stormwater Policy and shall implement, at its expense, all requirements of the Airports' Stormwater Pollution Prevention Plans (SWPPP) and City ordinances that pertain to Contractor's operations and activities on the Premises and the Airports to the extent the operations and activities have a potential to release pollutants to stormwater. Contractor shall use its best efforts to meet all deadlines that are established by applicable Environmental Laws and the Aviation Stormwater Policy. Contractor agrees that time is of the essence in the implementation of all City permit requirements.

4.6 Contractor's compliance with the AZPDES Permit Program set forth in 18 A.A.C. Chapter 9, Article 9 (R18-9-A901 to R18-9-A909); Chapter 32C of the Phoenix City Code; and the Aviation Stormwater Policy is a material requirement and condition of this Contract. If Contractor fails to comply with the foregoing and the City is exposed to any civil or criminal fine, penalty, sanction, or remediation cost, then the City may, in addition to all other remedies available under this Contract and applicable law, terminate this Contract.

4.7 AZPDES Construction General Permit. If Contractor decides to perform construction activities at the Premises or the Airports, Contractor shall, prior to commencing any such construction activity, obtain stormwater discharge authorization from ADEQ under an AZPDES Construction General Permit. Contractor must obtain that authorization by preparing a SWPPP and filing for AZPDES Construction General Permit coverage in coordination with the City's manager assigned to the project. The City may consult with and assist Contractor with filing for AZPDES Construction General Permit coverage. Contractor shall work with the City's project manager to develop pollution

controls (e.g., best management practices, control measures, and schedules and procedures) for the SWPPP. Contractor is solely responsible for implementing the pollution controls and paying for all costs related to its compliance with its AZPDES Construction General Permit obligations.

4.8 AZPDES Multi-Sector General Permit.

A. If Contractor activities performed at the Premises are under AZDPES Multi-Sector General Permit, the Contractor shall, prior to using, occupying, or commencing any operation or activity on the Premises or the Airports, obtain stormwater discharge authorization from ADEQ under an AZPDES Multi-Sector General Permit. Contractor shall obtain that authorization as a “co-permittee” with the City. As a co-permittee, Contractor shall do all the following:

(i) Provide the City with a copy of Contractor's written Authorization to Discharge that Contractor receives from ADEQ.

(ii) Implement the Airports' SWPPP, including all best management practices, control measures, schedules, and procedures that apply to the Contractor's use or occupancy of the Premises or the Airports.

B. In connection with its coverage under the AZPDES Multi-Sector General Permit, the City has developed a SWPPP for the Airports to minimize the contact of stormwater and other precipitation event water with Significant Materials (as that term is defined in the Section 32C-101 of the Phoenix City Code) generated, stored, handled, used, or otherwise located on the Premises or the Airports. The City shall provide a copy of the SWPPP, including best management practices, control measures, schedules, and procedures, to Contractor, who shall implement that portion of the SWPPP applicable to its use or occupancy of the Premises or the Airports.

C. To the extent allowed by applicable Environmental Laws, Contractor may ask to be removed as a co-permittee from coverage under the AZPDES Multi-Sector General Permit when this Contract expires or is terminated, Contractor vacates the Premises, Contractor fails to comply with the all AZPDES Multi-Sector General Permit requirements, or Contractor decides it does not want to be covered as a co-permittee. Contractor shall not be relieved of its obligation to comply with the requirements of the AZPDES Permit Program with regard to its use or occupancy of the Premises or the Airports, and Contractor shall not be excused from any obligation or indemnification incurred and owed to City prior to Contractor being removed as a co-permittee because Contractor failed to fulfill an obligation of a co-permittee.

4.9 Pollution Controls.

A. City reserves the right to impose upon Contractor any best management practices, control measures, schedules, procedures, and any other action reasonably necessary to ensure the City's ability to comply with its AZPDES Permit Program requirements or applicable City ordinances. However, except in Extreme Emergency Conditions (as that term is defined below), Contractor shall have thirty (30)

days from the City's notice imposing such pollution control measures and any other requirement to notify the City in writing if Contractor objects to any action Contractor is being directed by the City to undertake. If Contractor does not provide a timely objection, then Contractor will be deemed to have consented to the implementation of the pollution control measures or other requirements. If Contractor provides the City with timely notice of its objections, then the City and Contractor shall negotiate a prompt resolution of their differences. If a resolution is not reached within thirty (30) days, then the City's decision resolving the matter shall control. Contractor warrants that it will not serve a written notice of objections for purposes of delay or to avoid compliance with AZPDES Permit Program requirements or applicable City ordinances.

B. *Extreme Emergency Conditions* means all the following:

(i) Conditions that immediately impact the waters of the United States (e.g., Salt River) that result from an emergency, such as a fire, Release of a Regulated Substance, or explosion, that requires the responsible party or parties to immediately begin appropriate response activities independent of City's direction or oversight.

(ii) A catastrophic event that requires Contractor to close its business in the Premises. Contractor must implement pollution control measures before it reopens.

(iii) A collapse of the stormwater system or any other event that prevents the City from performing its obligations under the City's permit due to lack of capacity.

4.10 Covenant of Good Faith. City and Contractor shall act in good faith to implement any requirement imposed on them pursuant to the AZPDES Permit Program. The City and Contractor agree that close cooperation is necessary to ensure compliance with all AZPDES Multi-Sector General Permit requirements and to promote safety and minimize costs. The City and Contractor agree to a candid exchange of information necessary to coordinate a stormwater management and monitoring plan.



City of Phoenix
STREET TRANSPORTATION DEPARTMENT

Western Burrowing Owl

(*Athene cunicularia*)

The purpose of this flyer is to provide City of Phoenix employees and contractors working on City projects with basic knowledge to reduce the risk of impacting western burrowing owls.

Legal Status:

The western burrowing owl is protected under the Migratory Bird Treaty Act of 1918, as amended. All migratory birds and their parts (including eggs, feathers, and nests) are fully protected. They are also protected under Arizona State Law, Title 17-101, Title 17-235, and Title 17-236.

Species Description:

- Small, ground-dwelling owl (mass of approx. 5 oz.)
- Length: 7.6-9.9 inches, with long legs
- Wingspan: approx. 23 inches
- Round head, lacks ear tufts
- Distinct oval facial ruff, framed by a broad, puffy white eyebrow
- Bright yellow iris

Where are they found?

- Dry, open, short grass, treeless plains
- Human dominated landscapes such as:
 - Golf courses, airports
 - Agricultural fields, vacant lots
- Depends on other animals to construct burrows

Identifying an active burrow

- Western burrowing owls use burrows constructed by ground squirrels, badgers, coyotes, tortoises, etc., or may use pipes, culverts, and ditches.
- They may “decorate” the entrance to a burrow with cow, horse, or dog manure, feathers, vegetation, and trash items
- An active burrow may (not always) have owl excrement (“whitewash”) and/or pellets near the entrance

How to avoid impacting western burrowing owls:

- Scan ahead as you work
- **If western burrowing owls or potentially active burrows observed, STOP WORK and MOVE at least 100 feet away from the owl or occupied burrow before resuming work**
 - Do not harass or “shoo” the owl away
- If the project cannot avoid or stay outside 100 feet of the owl or active burrow, call contact listed below

Questions? Need to work within 100 feet of a western burrowing owl or active burrow? Contact a City of Phoenix Street Transportation Department Environmental Quality Specialist:

Andrea Love 602-495-6718 or via e-mail at <andrea.love@phoenix.gov>

Greta Halle 602-534-6030 or via e-mail at <greta.halle@phoenix.gov>

Sources: Arizona Department of Transportation Environmental Planning Group Western Burrowing Owl Awareness Flyer
Arizona Game and Fish Department Animal Abstract: Western Burrowing Owl. Heritage Data Management System

Updated November 18, 2019



Credit: DesertUSA.com/animals/cliff-swallow.html



City of Phoenix
STREET TRANSPORTATION DEPARTMENT

Migratory Bird Treaty Act

(Applies to many birds in Phoenix)

The purpose of this flyer is to provide City of Phoenix employees and contractors with basic knowledge to reduce the risk of impacting species protected by the Migratory Bird Treaty Act.

Migratory Bird Treaty Act (MBTA)

Under the Migratory Bird Treaty Act of 1918, as amended, listed birds and their parts (including eggs, feathers, and nests) are fully protected. They are also protected under Arizona State Law, Title 17-101, Title 17-235, and Title 17-236. The MBTA states that it is illegal to:

- Pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg of any such bird.
 - 'Take' is defined as to "pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect."

More information regarding the MBTA can be found at:

- <http://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php>
- <https://www.fws.gov/laws/lawsdigest/migtrea.html>

Where/When are they active?

- The nests of birds protected by the MBTA can be found in many places, including trees, shrubs, cacti, cattails, on the ground, in holes in the ground and on man-made structures including culverts, bridges, buildings, etc.
- The breeding cycle of most birds in Phoenix occurs between February 1 and August 31, although there are a few species that may nest outside that period. Some birds may be present year-round and others migrate, often during the late summer/early autumn period.

How to avoid impacting birds protected by the MBTA:

- If your project might impact active bird nests/burrows, work with one of the contacts below during the design process to make appropriate arrangements before the project activity begins. Necessary actions may include active nest surveys, seasonal restrictions, or obtaining a project-specific relocation permit from the U.S. Fish and Wildlife Service.
- When actively working, be aware of your surroundings. If you see a nest that appears active (chirping, aggressive or distracting adult bird behavior, eggs present, etc.) **STOP WORK** within 30 feet of the area and call one of the contacts below.

Questions? Work may impact birds protected by the MBTA? Contact a City of Phoenix Street Transportation Department Environmental Quality Specialist:

Andrea Love 602-495-6718 or via e-mail at <andrea.love@phoenix.gov>

Greta Halle 602-534-6030 or via e-mail at <greta.halle@phoenix.gov>

Updated November 18, 2019

SPECIAL PROVISIONS

SKY HARBOR INTERNATIONAL AIRPORT

1.1 Airfield Driver's License

1.1.1 All personnel operating a motor vehicle within the secured areas of Sky Harbor Airport will have a valid airfield driver's license issued by the Phoenix Aviation Department/Operations Division. To qualify for a license, personnel must possess a current valid state driver's license. Individuals must also complete an airfield driver's permit application form, attend an airfield driver's training seminar, and successfully pass a written exam. Applicants must pre-register to attend a class. Contact the Phoenix Aviation Department's Operations Division (602) 273-2036 to make the necessary arrangement.

1.1.2 Exception: Drivers in vehicles without an airfield driver's license may be escorted by a driver in a vehicle with an airfield driver's license. Example: Material supplier vehicle with drivers without an airfield driver's license will be escorted to and from the construction site within the secured area by the Contractor's supplied escort vehicle of which the driver has a valid airfield driver's license. Maximum convoy length will not exceed three vehicles plus the one escort vehicle (total of four). All escorted vehicles must be in the immediate control of the vehicle conducting the escort.

1.2 Security Badges

1.2.1 All construction personnel assigned to the project requiring access to the airport's restricted areas, except for escorted, in-transit material supplies, will apply for an airport security badge. The airport badge must be worn on their outermost garment above the waist at all times while in the restricted areas of the airport. The Contractor and the Subcontractor can apply for these items by contacting the Phoenix Aviation Department Operations Division at (602) 273-2036. A photo identification badge will be made for each employee. Employees will be subject to a federally mandated background check, Criminal History Records Check and Security Threat Assessment, and must pass the security training before a badge can be issued to the applicant. All companies must first establish and maintain at least one Authorized Signer to authorize the issuance of airport security badges for their respective employees. Construction companies need to take into consideration that there is a processing period from the time badge applications are submitted to when the airport security badge is issued. For example, it takes a minimum of seven (7) days for background checks to clear pending all requirements have been met. The total badge fee is \$89. This includes a \$27 fee per person for a criminal history records check, a \$7 fee for a Security Threat Assessment, a \$5 fee for the security badge itself and a \$50 badge control fee that will be returned to the individual or company that paid for it upon return of the badge to the Aviation Department. Fees may be subject to change.

As a general rule, employees working the project for more than seven (7) days may not be escorted and must process for their own airport security badge. All pertinent information regarding the airport's badging process (badge applications, fees, identification, documents, etc.) can be obtained at skyharbor.com/badging.

1.2.2 The Contractor is responsible for obtaining a written 10-year employment history from all employees applying for airport security badges. The Contractor must verify and document in writing the most recent 5 years of the employee's 10-year employment history. The contracting company must complete the employment verifications for an employee prior to signing the employee's badge application form. In addition, the Contractor must retain this past 10-year verification on file in the Contractor's office.

1.2.3 Attendance at a security-training seminar is mandatory prior to the issuance of security badges. All security badge applicants must attend a 2-hour SDA (Security Display Area) training class. Applicants must be pre-registered to attend a class. Contact the Phoenix Aviation Department's Operations Division at (602) 273-2036 to make the necessary arrangements.

1.3 Aircraft Safety

1.3.1 The Contractor will be required to coordinate his work so as to satisfy clearance requirements for arrival and departure of aircraft, and in compliance with FAA Advisory Circulars AC 150/5300-13, AC 150/5370-2, and the Special Safety Requirements concerning operational safety on airports during construction activity.

1.3.2 A high degree of care is necessary to control debris and dust so as not to collect onto aircraft or to accumulate on aprons, taxiways and runways, and not be a visual obstruction nuisance. The Contractor will take whatever steps, procedures, or measures required to prevent loose material from blowing onto aircraft or onto the airfield. The dust control measures will be maintained at all times during the construction of the Project, to the satisfaction of the Aviation Department. The Contractor's Representative will be aware that the construction area is subject to jet blast that is equivalent to wind velocities of 75 to 90 miles per hour.

1.3.3 The Contractor will be charged the aggregate cost of any cleanup/repairs performed by others from the dust/debris leaving the work area.

1.4 Red Obstruction Lights

1.4.1 The Contractor will provide red obstruction lights and a 3 foot square flag with alternating 1 foot square orange and white checkers for all stationary cranes erected on the construction site. All movable cranes will be equipped with red obstruction lights and a 3 foot square flag with alternating 1 foot square orange and white checkers during working hours. This requirement may be waived when the boom is lowered and the crane is not in use. The Aviation Department will issue Local Notice to Airmen on obstruction lighting and the Contractor will notify the Project Architect/Engineer if any relocation takes place. The Aviation Department Airside Operations Division, (602) 273-2008, must be notified no later than 48 hours prior to erecting the crane, so that a Notice to Airmen (NOTAM) may be issued in a timely manner. Equipment may be required to be removed from the air operations area at night at the discretion of the Aviation Operations Division.

1.5 Yellow Warning Lights For Vehicles

1.5.1 The Contractor will provide yellow-warning lights at all times during work hours, and checkered flags during daylight hours for all vehicles on the construction site.

1.6 Safety & Security Non-Conformance Contract Adjustment (Deductions)

1.6.1 Due to the safety and security precautions necessary at Phoenix Sky Harbor International Airport, failure of the Contractor to adhere to the prescribed requirements has consequences that may jeopardize health, welfare and the lives of customers and employees at Sky Harbor. Therefore, if the Contractor is found to be in non-compliance with the security, airfield and badging/licensing requirements, the Aviation Department may issue Safety & Security Non-Conformance Contract Adjustment (Deductions). Appeals to the Safety & Security Non-Conformance Contract Adjustment (Deductions) can be made within four (4) days of the incident by writing to the Airports Civil Engineer (Project Manager) in charge of the Project. The appeal would need to state why the Safety & Security Non-Conformance Contract Adjustment (Deductions) circumstance is unwarranted. A final decision by the Project Manager will then be made.

1.6.2 Safety & Security Non-Conformance Contract Adjustment (Deductions) Schedule:

1. Runway Incursion	\$15,000.00
2. Active Taxiway Incursion	\$10,000.00
3. Runway/Taxiway Safety Area	\$ 1,000.00
4. Security Non-Compliance	
First Offense	\$ 1,000.00
Second Offense	\$ 5,000.00

Each Additional Offense

\$15,000.00

5. Badging/Licensing Non-Compliance
Fine same as 4

6. Aviation Department has the option to issue warnings on first offense, if the incident is justified.

7. Individuals involved in a non-compliance violation may be required to surrender their security badge and airfield driver's license pending investigation of the matter.

1.7 Disposal of Surplus Material

1.7.1 All surplus and/or waste material must be disposed of off the Airport property at the Contractor's discretion, subject to the following conditions:

1.7.2 If the City landfills are used, the Contractor will pay the normal dumping fee.

1.7.3 If private property within the City limits is used, the Contractor will obtain written permission from the property owner and deliver a copy of this agreement to the City prior to any hauling dumping. If the surplus material is disposed of outside City limits, the Contractor will comply with all applicable laws/ordinances of the agency concerned and be responsible for all costs incurred.

1.8 Contractor's Parking

1.8.1 The Contractor's employees will not be permitted to park their personal vehicles in the Airport parking garages or other parking areas intended for passenger and other airport users.

1.8.2 A limited number of parking cards will be made available for the Contractor to purchase and use. These parking cards will be paid for on a monthly basis and are available at the sole discretion of the Aviation Parking Coordinator.

1.9 Agreement Contingency and Allowance

1.9.1 A General Contingency Allowance is provided for the purpose of encumbering funds to cover possible additional work. The amount of the allowance item is determined by the Project Manager and is not subjected to individual bid pricing. All bidders will incorporate the amount pre-entered in the bid proposal and will reflect the same in the total amount bid for this Project. This allowance item provides estimated funding to cover unforeseen conditions that may be encountered and correspond to extra work needed to complete the project per plan. Unforeseen extra work, if any, will be approved by the Project Manager.

1.9.2 It will be understood that this allowance is an estimate only and is based on the history of similar projects. It will not be utilized without the Project Manager's approval. It is further understood that authorized extra work, if any, may be less than the allowance item.

1.10 Site Security

1.10.1 The Contractor will contact the Airport Security Coordinator (602) 273-2036 fifteen (15) calendar days before the start of construction to submit the necessary airport security information for all vehicles and personnel that will be required inside the airport security fence during construction. Vehicle logo requirements (including vehicles with magnetic company logos) and current registration vehicle tags also apply. The Contractor will also be required to submit a letter of verification received from the City, or the City sponsor, identifying the Contractor, its involvement in the project, and length of time of Agreement. New company information manual can be provided to the Contractor prior to submission of paperwork so that all paperwork is ready. This New Company Information Manual can be obtained in the Security Badging Office.

1.11 Vehicle Traffic Regulations (including vehicles with magnetic company logos)

- 1.11.1 The following will be considered major streets: AIR LANE (north of ARFF No. 29) and SKY HARBOR BLVD. (north of ARFF No. 19)
- 1.11.2 All traffic and/or traffic control devices on this project will be provided, maintained and/or controlled as specified in the City of Phoenix Traffic Barricade Manual MUTCD, latest revision.
- 1.11.3 Permission to restrict City streets will be requested as specified in Section III of the Traffic Barricade Manual.
- 1.11.4 Unless otherwise provided in the following "Aircraft Traffic Regulations," all traffic on this Project will be regulated as specified in Section IV of the Traffic Barricade Manual. Non-peak hours at Phoenix Sky Harbor International Airport are 11:00 p.m. to 5:00 a.m. for lane restrictions. Contractor needs to coordinate closely with Aviation airside operation.
- 1.11.5 No deviation to the "Aircraft Traffic Regulations" will be allowed or implemented unless submitted to the City for review and approval two (2) weeks prior to proposed Work.
- 1.11.6 The Contractor will submit Traffic Control Plans to the Engineer for approval for all work affecting City Streets.
- 1.12 **Aircraft Traffic Regulations**
- 1.12.1 Special Regulations for Aircraft Traffic: Aircraft traffic will continue to use existing runways, aprons, and taxiways of the Airport during the times that work under this contract is being performed. The Contractor will at all times so conduct his work as to create no hindrance, hazard, or obstacle to aircraft using the airport, and must, at all times, conduct the work in conformance with the requirements of the Airport Director, and FAA Control Tower, or their authorized representative.
- 1.12.2 Proposed haul routes across aircraft movement areas will require controlled crossings with radio equipped flagmen at each side of the controlled crossing, in accordance with Aviation Department details and requirements.
- 1.13 **Asbestos/Lead Based Paint Identification and Remediation**
- 1.13.1 Asbestos and lead based paint identification and/or remediation will be performed by the City of Phoenix unless otherwise indicated by an authorized City of Phoenix representative. Prior to starting Work, the Contractor should obtain a copy of the asbestos and lead based paint survey of the affected area, and contact the City of Phoenix Aviation Environmental Division Manager prior to the disturbance of any building materials that contain or potentially contain asbestos or lead based paint. Building materials that could potentially contain asbestos include any materials that are not wood, metal or glass. Any building materials that will be disturbed during renovation or demolition projects that have not been previously inspected will be inspected by an Asbestos Hazard Emergency Response Act (AHERA) certified building inspector approved by the City of Phoenix. Any asbestos and lead based paint remediation activities will be conducted by contractors licensed to perform asbestos and lead based paint remedial activities and will be approved by the City of Phoenix. All asbestos and lead based paint inspection and remedial work will be performed in compliance with all applicable local, state and federal regulations regarding asbestos, lead based paint and general construction.

**FEDERAL CONTRACT PROVISIONS
FOR AIRPORT IMPROVEMENT PROGRAM CONSTRUCTION PROJECTS**

	Provision	Page	Attachment
I.	Buy American Preferences – 49 U.S.C. § 50101	3	Attachment 1
II.	Title VI of the Civil Rights Act of 1964 – Compliance with Nondiscrimination Requirements -- 42 U.S.C. § 47123 and FAA Order 1400.11	4	
III.	General Civil Rights Provisions – 49 U.S.C. § 47123	7	
IV.	Lobbying and Influencing Federal Employees – 31 U.S.C. § 1352; 49 C.F.R. Part 20, Appendix A; 2 C.F.R. Part 200, Appendix II(I)	7	Attachment 2
V.	Access to Records and Reports – 2 C.F.R. §§ 200.333, 200.336 and FAA Order 5100.38	7	
VI.	Disadvantaged Business Enterprises – 49 C.F.R. Part 26	7	
VII.	Breach of Contract Terms – 2 C.F.R. § 200, Appx. II(A)	10	
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IX.	Trade Restriction Certification – 49 U.S.C. § 50104; 49 C.F.R. Part 30	11	Attachment 4
X.	Intentionally Omitted	11	
XI.	Veteran's Preference – 49 U.S.C. § 47112	11	
XII.	Davis Bacon Requirements - 2 CFR Part 200, Appendix II(D), 29 CFR Part 5, 49 USC § 47112(b), 40 USC §§ 3141-3144, 3146, and 3147	11	
XIII.	Equal Employment Opportunity – 41 C.F.R. §§ 60-1.4 and 60-4.3; 2 C.F.R. § 200, Appx. II(C), and Executive Order 11246	18	Attachment 5
XIV.	Prohibition of Segregated Facilities – 2 CFR 200, Appendix II(C), 41 C.F.R. § 60-1.	24	Attachment 6
XV.	Notice of Requirement for Affirmative Action – 41 C.F.R. § 60-4 and Executive Order 11246	25	
XVI.	Tax Delinquency and Felony Convictions - Section 8113 of the Consolidated Appropriations Act, 2022 (Public Law 117-103) and similar provisions in subsequent appropriations acts; DOT Order 4200.6	26	Attachment 7
XVII.	Termination of Contract – 2 C.F.R. Part 200, Appx. II(B) and FAA Circular 150/5370-10, § 80-09	26	
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XIX.	Contract Workhours and Safety Standards Act Requirements – 2 C.F.R. Part 200, Appx. II(E), 2 CFR § 5.5(b), 40 USC § 3702, 3704	28	
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Please Note: Attachments are located at end of this Exhibit.

ADDITIONAL FEDERAL CONTRACT PROVISIONS FOR AIRPORT IMPROVEMENT PROGRAM CONSTRUCTION PROJECTS

The Contractor is required to comply with all of the following federal contract provisions as applicable to this Contract.

I. Buy American Preference, 49 U.S.C. § 50101

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/City 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.

Type of Certification is Based on Type of Project

There are two types of FAA Buy American certifications:

Construction Projects involving the replacement, rehabilitation, reconstruction of airfield surfaces such as on runways, taxiways, taxilanes, aprons, roadways, parking lots, etc. See [Attachment 1](#) to complete the Certificate of compliance to FAA Buy American Preference Based on Construction Projects, if applicable.

Equipment and Buildings Projects involving and including the acquisition of equipment such as snow removal equipment, navigational aids, wind cones, and the construction of buildings such as hangars, terminal development, lighting vaults, aircraft rescue & firefighting buildings, etc. See [Attachment 1](#) to complete the Certificate of Compliance with FAA Buy American Preference Based on Equipment/Building Projects, if applicable.

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.

See [Attachment 1](#).

II. Title VI of the Civil Rights Act of 1964 – Compliance with Nondiscrimination Requirements – 49 U.S.C. § 47123 and FAA Order 1400.11

Title VI Solicitation Notice.

The City, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders and offerors that it will affirmatively ensure that, in 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 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).

Nondiscrimination Requirements/Title VI Clauses for Compliance

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 incorporated herein 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, or 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 C.F.R. 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 City or the Federal Aviation Administration and Authorities 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 City 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 the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the City will impose such Contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including:

- a. Withholding payments to the Contractor under the Contract until the Contractor complies and/or
- b. Cancelling, terminating, or suspending the Contract, in whole or in part.

6. Incorporation of Provisions. The Contractor will include the provisions of paragraphs 1 through 6 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 City 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 City to enter into any litigation to protect the interests of the City. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

III. General Civil Rights Provisions -- 49 U.S.C. § 47123

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.

1. Specific Clause that is Used in General Contract Agreements.

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

2. Specific Clause that is used for Lease Agreements or Transfer Agreements.

If the Contractor transfers its obligation to another, the transferee is obligated in the same manner as the Contractor.

The above provision obligates the Contractor for the period during which the property is owned, used or possessed by the Contractor and the airport remains obligated to the Federal Aviation Administration.

IV. Lobbying and Influencing Federal Employees – 31 U.S.C. § 1352; 49 C.F.R. Part 20, Appendix A; 2 C.F.R. Part 200, Appx. II(I)

See [Attachment 2](#).

V. Access to Records and Reports – 2 C.F.R. §§ 200.334, 200.337 and FAA Order 5100.38

The Contractor shall maintain an acceptable cost accounting system. The Contractor agrees to provide the City, the FAA, 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 that are directly pertinent to this 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.

VI. Disadvantaged Business Enterprises – 49 C.F.R. Part 26

Solicitation Language (Solicitations that include a Contract Goal)

Bid Information Submitted as a matter of responsiveness:

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

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

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

Bid Information submitted as a matter of responsibility:

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

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

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

when a non-DBE subcontractor was selected over a DBE for work on the contract.

Solicitation Language (Race/Gender Neutral Means)

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

Prime Contracts (Contracts Covered by a DBE Program)

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 the City 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 seven days, not to exceed 30 days from the receipt of each payment the prime contractor receives from the City. The prime contractor agrees further to return retainage payments to each subcontractor within seven days, not to exceed 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 City. 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 OpenGov ID No. AV41000079 FAA/ADOT, without prior written consent of the City. 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 City. Unless the City 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 City may provide such written consent only if the City 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 City 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 City, 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 City and the contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the City should not approve the prime contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the City 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.

VII. Breach of Contract Terms – 2 C.F.R. Part 200, Appx. II(A)

Any violation or breach of the terms of this Contract by 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 Contract.

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

The duties and obligations imposed by this Contract and the rights and remedies available hereunder are in addition to, and not a limitation of, any duties, obligations, rights, and remedies otherwise imposed or available by law.

VIII. Right to Inventions – 2 CFR Part 200, Appx. II(F) and 37 CFR § 401

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

this requirement in all sub-tier contracts involving experimental, developmental, or research work.

See [Attachment 3](#).

IX. Trade Restriction Certification – 49 U.S.C. § 50104; 49 C.F.R. Part 30

See [Attachment 4](#).

X. Intentionally Omitted

XI. Veteran's Preference – 49 U.S.C. § 47112(c)

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

XII. Davis-Bacon Requirements – 2 CFR Part 200, Appendix II(D), 29 CFR Part 5, 49 USC § 47112(b), 40 U.S.C. §§ 3141 – 3144, 3146 and 3147

The provisions below are to be incorporated into all construction contracts and subcontracts that exceed \$2000 and include funding from the AIP.

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 Administration 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 the City, 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 the City, 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 the City, 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 the City).

(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 the City, 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 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.

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Title 29 — Labor

Subtitle A — Office of the Secretary of Labor

Part 5 Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction (Also Labor Standards Provisions Applicable to Nonconstruction Contracts Subject to the Contract Work Hours and Safety Standards Act)

Subpart A Davis-Bacon and Related Acts Provisions and Procedures

§ 5.1 Purpose and scope.

§ 5.2 Definitions.

§§ 5.3-5.4 [Reserved]

§ 5.5 Contract provisions and related matters.

§ 5.6 Enforcement.

§ 5.7 Reports to the Secretary of Labor.

§ 5.8 Liquidated damages under the Contract Work Hours and Safety Standards Act.

§ 5.9 Suspension of funds.

§ 5.10 Restitution, criminal action.

§ 5.11 Disputes concerning payment of wages.

§ 5.12 Debarment proceedings.

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§ 5.29 Specific fringe benefits.

§ 5.30 Types of wage determinations.

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§ 5.32 Overtime payments.

§ 5.33 Administrative expenses of a contractor or subcontractor.

Subpart C Severability

§ 5.40 Severability.

PART 5—LABOR STANDARDS PROVISIONS APPLICABLE TO CONTRACTS COVERING FEDERALLY FINANCED AND ASSISTED CONSTRUCTION (ALSO LABOR STANDARDS PROVISIONS APPLICABLE TO NONCONSTRUCTION CONTRACTS SUBJECT TO THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT)

Authority: 5 U.S.C. 301; Reorganization Plan No. 14 of 1950, 5 U.S.C. appendix; 28 U.S.C. 2461 note; 40 U.S.C. 3141 *et seq.*; 40 U.S.C. 3145; 40 U.S.C. 3148; 40 U.S.C. 3701 *et seq.*; Secretary's Order No. 01-2014, 79 FR 77527; and the laws referenced by § 5.1(a).

Source: 48 FR 19541, Apr. 29, 1983, unless otherwise noted.

Subpart A—Davis-Bacon and Related Acts Provisions and Procedures

Source: 48 FR 19540, Apr. 29, 1983, unless otherwise noted.

Editorial Note: Nomenclature changes to subpart A of part 5 appear at 61 FR 19984, May 3, 1996.

§ 5.1 Purpose and scope.

- (a) The regulations contained in this part are promulgated under the authority conferred upon the Secretary of Labor by Reorganization Plan No. 14 of 1950 (64 Stat. 1267, as amended, 5 U.S.C. appendix) and the Copeland Act (48 Stat. 948; 18 U.S.C. 874; 40 U.S.C. 3145) in order to coordinate the administration and enforcement of labor standards provisions contained in the Davis-Bacon Act (46 Stat. 1494, as amended; 40 U.S.C. 3141 *et seq.*) and its related statutes ("Related Acts").
 - (1) A listing of laws requiring Davis-Bacon labor standards provisions can be found at www.dol.gov/agencies/whd/government-contracts or its successor website.
 - (2) [Reserved]
- (b) Part 1 of this subtitle contains the Department's procedural rules governing requests for wage determinations and the issuance and use of such wage determinations under the Davis-Bacon Act and its Related Acts.

[88 FR 57731, Aug. 23, 2023]

§ 5.2 Definitions.

Administrator. The term “Administrator” means the Administrator of the Wage and Hour Division, U.S. Department of Labor, or authorized representative.

Agency. The term “agency” means any Federal, State, or local government agency or instrumentality, or other similar entity, that enters into a contract or provides assistance through loan, grant, loan guarantee or insurance, or otherwise, to a project subject to the Davis-Bacon labor standards, as defined in this section.

(1) **Federal agency.** The term “Federal agency” means an agency or instrumentality of the United States or the District of Columbia, as defined in this section, that enters into a contract or provides assistance through loan, grant, loan guarantee or insurance, or otherwise, to a project subject to the Davis-Bacon labor standards.

(2) [Reserved]

Agency Head. The term “Agency Head” means the principal official of an agency and includes those persons duly authorized to act on behalf of the Agency Head.

Apprentice and helper. The terms “apprentice” and “helper” are defined as follows:

(1) “Apprentice” means:

- (i) A person employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship, or with a State Apprenticeship Agency recognized by the Office of Apprenticeship; or
- (ii) A person in the 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 or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice;

(2) These provisions do not apply to apprentices and trainees employed on projects subject to 23 U.S.C. 113 who are enrolled in programs which have been certified by the Secretary of Transportation in accordance with 23 U.S.C. 113(c).

(3) A distinct classification of helper will be issued in wage determinations applicable to work performed on construction projects covered by the labor standards provisions of the Davis-Bacon and Related Acts only where:

- (i) The duties of the helper are clearly defined and distinct from those of any other classification on the wage determination;
- (ii) The use of such helpers is an established prevailing practice in the area; and
- (iii) The helper is not employed as a trainee in an informal training program. A “helper” classification will be added to wage determinations pursuant to § 5.5(a)(1)(iii)(A) only where, in addition, the work to be performed by the helper is not performed by a classification in the wage determination.

Building or work. The term “building or work” generally includes construction activities of all types, as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The term includes, without limitation, buildings, structures, and improvements of all types, such as bridges, dams, solar panels, wind turbines, broadband installation, installation of electric car chargers, plants, highways,

parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, canals, dredging, shoring, rehabilitation and reactivation of plants, scaffolding, drilling, blasting, excavating, clearing, and landscaping. The term "building or work" also includes a portion of a building or work, or the installation (where appropriate) of equipment or components into a building or work.

Construction, prosecution, completion, or repair. The term "construction, prosecution, completion, or repair" means the following:

- (1) These terms include all types of work done—
 - (i) On a particular building or work at the site of the work, as defined in this section, by laborers and mechanics employed by a contractor or subcontractor, or
 - (ii) In the construction or development of a project under a development statute.
- (2) These terms include, without limitation (except as specified in this definition):
 - (i) Altering, remodeling, installation (where appropriate) on the site of the work of items fabricated offsite;
 - (ii) Painting and decorating;
 - (iii) Manufacturing or furnishing of materials, articles, supplies or equipment, but only if such work is done by laborers or mechanics
 - (A) Employed by a contractor or subcontractor, as defined in this section, on the site of the work, as defined in this section, or
 - (B) In the construction or development of a project under a development statute;
 - (iv) "Covered transportation," defined as any of the following activities:
 - (A) Transportation that takes place entirely within a location meeting the definition of "site of the work" in this section;
 - (B) Transportation of one or more "significant portion(s)" of the building or work between a "secondary construction site" as defined in this section and a "primary construction site" as defined in this section;
 - (C) Transportation between an "adjacent or virtually adjacent dedicated support site" as defined in this section and a "primary construction site" or "secondary construction site" as defined in this section;
 - (D) "Onsite activities essential or incidental to offsite transportation," defined as activities conducted by a truck driver or truck driver's assistant on the site of the work that are essential or incidental to the transportation of materials or supplies to or from the site of the work, such as loading, unloading, or waiting for materials to be loaded or unloaded, but only where the driver or driver's assistant's time spent on the site of the work is not *de minimis*; and
 - (E) Any transportation and related activities, whether on or off the site of the work, by laborers and mechanics employed in the construction or development of the project under a development statute.
 - (v) Demolition and/or removal, under any of the following circumstances:

- (A) Where the demolition and/or removal activities themselves constitute construction, alteration, and/or repair of an existing building or work. Examples of such activities include the removal of asbestos, paint, components, systems, or parts from a facility that will not be demolished; as well as contracts for hazardous waste removal, land recycling, or reclamation that involve substantial earth moving, removal of contaminated soil, re-contouring surfaces, and/or habitat restoration.
 - (B) Where subsequent construction covered in whole or in part by the labor standards in this part is contemplated at the site of the demolition or removal, either as part of the same contract or as part of a future contract. In determining whether covered construction is contemplated within the meaning of this provision, relevant factors include, but are not limited to, the existence of engineering or architectural plans or surveys of the site; the allocation of, or an application for, Federal funds; contract negotiations or bid solicitations; the stated intent of the relevant government officials; and the disposition of the site after demolition.
 - (C) Where otherwise required by statute.
- (3) Except for transportation that constitutes "covered transportation" as defined in this section, construction, prosecution, completion, or repair does not include the transportation of materials or supplies to or from the site of the work.

Contract. The term "contract" means any prime contract which is subject wholly or in part to the labor standards provisions of any of the laws referenced by § 5.1 and any subcontract of any tier thereunder, let under the prime contract. With the exception of work performed under a development statute, the terms contract and subcontract do not include agreements with employers that meet the definition of a material supplier under this section.

Contracting officer. The term "contracting officer" means the individual, a duly appointed successor, or authorized representative who is designated and authorized to enter into contracts on behalf of an agency, sponsor, owner, applicant, or other similar entity.

Contractor. The term "contractor" means any individual or other legal entity that enters into or is awarded a contract that is subject wholly or in part to the labor standards provisions of any of the laws referenced by § 5.1, including any prime contract or subcontract of any tier under a covered prime contract. In addition, the term contractor includes any surety that is completing performance for a defaulted contractor pursuant to a performance bond. The U.S. Government, its agencies, and instrumentalities are not contractors, subcontractors, employers or joint employers for purposes of the labor standards provisions of any of the laws referenced by § 5.1. A State or local government is not regarded as a contractor or subcontractor under statutes providing loans, grants, or other Federal assistance in situations where construction is performed by its own employees. However, under development statutes or other statutes requiring payment of prevailing wages to all laborers and mechanics employed on the assisted project, such as the U.S. Housing Act of 1937, State and local recipients of Federal-aid must pay these workers according to Davis-Bacon labor standards. The term "contractor" does not include an entity that is a material supplier, except if the entity is performing work under a development statute.

Davis-Bacon labor standards. The term "Davis-Bacon labor standards" as used in this part means the requirements of the Davis-Bacon Act, the Contract Work Hours and Safety Standards Act (other than those relating to safety and health), the Copeland Act, and the prevailing wage provisions of the other statutes referenced in § 5.1, and the regulations in this part and in parts 1 and 3 of this subtitle.

Development statute. The term "development statute" includes the United States Housing Act of 1937; the Housing Act of 1949; and the Native American Housing Assistance and Self-Determination Act of 1996, and any other Davis-Bacon Related Act that requires payment of prevailing wages under the Davis-Bacon labor standards to all laborers and mechanics employed in the development of a project and for which the Administrator determines that the statute's language and/or legislative history reflected clear congressional intent to apply a coverage standard different from the Davis-Bacon Act itself.

Employed. Every person performing the duties of a laborer or mechanic in the construction, prosecution, completion, or repair of a public building or public work, or building or work financed in whole or in part by assistance from the United States through loan, grant, loan guarantee or insurance, or otherwise, is "employed" regardless of any contractual relationship alleged to exist between the contractor and such person.

Laborer or mechanic. The term "laborer or mechanic" includes at least those workers whose duties are manual or physical in nature (including those workers who use tools or who are performing the work of a trade), as distinguished from mental or managerial. The term "laborer" or "mechanic" includes apprentices, helpers, and, in the case of contracts subject to the Contract Work Hours and Safety Standards Act, watchpersons or guards. The term does not apply to workers whose duties are primarily administrative, executive, or clerical, rather than manual. Persons employed in a bona fide executive, administrative, or professional capacity as defined in 29 CFR part 541 are not deemed to be laborers or mechanics. Forepersons who devote more than 20 percent of their time during a workweek to mechanic or laborer duties, and who do not meet the criteria of part 541, are laborers and mechanics for the time so spent.

Material supplier. The term "material supplier" is defined as follows:

- (1) A material supplier is an entity meeting all of the following criteria:
 - (i) Its only obligations for work on the contract or project are the delivery of materials, articles, supplies, or equipment, which may include pickup of the same in addition to, but not exclusive of, delivery, and which may also include activities incidental to such delivery and pickup, such as loading, unloading, or waiting for materials to be loaded or unloaded; and
 - (ii) Its facility or facilities that manufactures the materials, articles, supplies, or equipment used for the contract or project:
 - (A) Is not located on, or does not itself constitute, the project or contract's primary construction site or secondary construction site as defined in this section; and
 - (B) Either was established before opening of bids on the contract or project, or is not dedicated exclusively, or nearly so, to the performance of the contract or project.
- (2) If an entity, in addition to being engaged in the activities specified in paragraph (1)(i) of this definition, also engages in other construction, prosecution, completion, or repair work at the site of the work, it is not a material supplier.

Prime contractor. The term "prime contractor" means any person or entity that enters into a contract with an agency. For the purposes of the labor standards provisions of any of the laws referenced by § 5.1, the term prime contractor also includes the controlling shareholders or members of any entity holding a prime contract, the joint venturers or partners in any joint venture or partnership holding a prime contract, and any contractor (e.g., a general contractor) that has been delegated the responsibility for overseeing all

or substantially all of the construction anticipated by the prime contract. For the purposes of the provisions in §§ 5.5 and 5.9, any such related entities holding different prime contracts are considered to be the same prime contractor.

Public building or public work. The term “public building or public work” includes a building or work, the construction, prosecution, completion, or repair of which, as defined in this section, is carried on directly by authority of or with funds of a Federal agency to serve the interest of the general public regardless of whether title thereof is in a Federal agency. The construction, prosecution, completion, or repair of a portion of a building or work, or the installation (where appropriate) of equipment or components into a building or work, may still be considered a public building or work, even where the entire building or work is not owned, leased by, or to be used by a Federal agency, as long as the construction, prosecution, completion, or repair of that portion of the building or work, or the installation (where appropriate) of equipment or components into that building or work, is carried on by authority of or with funds of a Federal agency to serve the interest of the general public.

Secretary. The term “Secretary” includes the Secretary of Labor, and their authorized representative.

Site of the work. The term “site of the work” is defined as follows:

(1) “Site of the work” includes all of the following:

- (i) The primary construction site(s), defined as the physical place or places where the building or work called for in the contract will remain.
- (ii) Any secondary construction site(s), defined as any other site(s) where a significant portion of the building or work is constructed, *provided* that such construction is for specific use in that building or work and does not simply reflect the manufacture or construction of a product made available to the general public, and *provided further* that the site is either established specifically for the performance of the contract or project, or is dedicated exclusively, or nearly so, to the performance of the contract or project for a specific period of time. A “significant portion” of a building or work means one or more entire portion(s) or module(s) of the building or work, such as a completed room or structure, with minimal construction work remaining other than the installation and/or final assembly of the portions or modules at the place where the building or work will remain. A “significant portion” does not include materials or prefabricated component parts such as prefabricated housing components. A “specific period of time” means a period of weeks, months, or more, and does not include circumstances where a site at which multiple projects are in progress is shifted exclusively or nearly so to a single project for a few hours or days in order to meet a deadline.
- (iii) Any adjacent or virtually adjacent dedicated support sites, defined as:
 - (A) Job headquarters, tool yards, batch plants, borrow pits, and similar facilities of a contractor or subcontractor that are dedicated exclusively, or nearly so, to performance of the contract or project, *and* adjacent or virtually adjacent to either a primary construction site or a secondary construction site, and
 - (B) Locations adjacent or virtually adjacent to a primary construction site at which workers perform activities associated with directing vehicular or pedestrian traffic around or away from the primary construction site.

- (2) With the exception of locations that are on, or that themselves constitute, primary or secondary construction sites as defined in paragraphs (1)(i) and (ii) of this definition, site of the work does not include:
- (i) Permanent home offices, branch plant establishments, fabrication plants, tool yards, etc., of a contractor or subcontractor whose location and continuance in operation are determined wholly without regard to a particular Federal or federally assisted contract or project; or
 - (ii) Fabrication plants, batch plants, borrow pits, job headquarters, tool yards, etc., of a material supplier, which are established by a material supplier for the project before opening of bids and not on the primary construction site or a secondary construction site, even where the operations for a period of time may be dedicated exclusively, or nearly so, to the performance of a contract.

Subcontractor. The term "subcontractor" means any contractor that agrees to perform or be responsible for the performance of any part of a contract that is subject wholly or in part to the labor standards provisions of any of the laws referenced in § 5.1. The term subcontractor includes subcontractors of any tier.

United States or the District of Columbia. The term "United States or the District of Columbia" means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentalities of the United States and of the District of Columbia, including non-appropriated fund instrumentalities and any corporation for which all or substantially all of its stock is beneficially owned by the United States or by the foregoing departments, establishments, agencies, or instrumentalities.

Wages. The term "wages" means the basic hourly rate of pay; any contribution irrevocably made by a contractor or subcontractor to a trustee or to a third person pursuant to a bona fide fringe benefit fund, plan, or program; and the rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing bona fide fringe benefits to laborers and mechanics pursuant to an enforceable commitment to carry out a financially responsible plan or program, which was communicated in writing to the laborers and mechanics affected. The fringe benefits enumerated in the Davis-Bacon Act include medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing; unemployment benefits; life insurance, disability insurance, sickness insurance, or accident insurance; vacation or holiday pay; defraying costs of apprenticeship or other similar programs; or other bona fide fringe benefits. Fringe benefits do not include benefits required by other Federal, State, or local law.

Wage determination. The term "wage determination" includes the original decision and any subsequent decisions revising, modifying, superseding, correcting, or otherwise changing the provisions of the original decision. The application of the wage determination must be in accordance with the provisions of § 1.6 of this subtitle.

[88 FR 57731, Aug. 23, 2023]

§§ 5.3-5.4 [Reserved]

§ 5.5 Contract provisions and related matters.

- (a) **Required contract clauses.** The Agency head will cause or require the contracting officer to require the contracting officer to insert in full, or (for contracts covered by the Federal Acquisition Regulation (48 CFR chapter 1)) by reference, in any contract in excess of \$2,000 which is entered into for the actual

construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the laws referenced by § 5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, *Provided*, That such modifications are first approved by the Department of Labor):

(1) **Minimum wages —**

(i) **Wage rates and fringe benefits.** All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents 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. As provided in paragraphs (d) and (e) of this section, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(v) 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph (a)(4) of this section. 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 classifications and wage rates conformed under paragraph (a)(1)(iii) of this section) and the Davis-Bacon poster (WH-1321) must 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 be easily seen by the workers.

(ii) **Frequently recurring classifications.**

(A) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph (a)(1)(iii) of this section, provided that:

- (1) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;
- (2) The classification is used in the area by the construction industry; and

(3) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(B) The Administrator will establish wage rates for such classifications in accordance with paragraph (a)(1)(iii)(A)(3) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

(iii) **Conformance.**

(A) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

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

(2) The classification is used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(C) 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 will be sent by the contracting officer by email to DBAconformance@dol.gov. 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.

(D) 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 will, by email to DBAconformance@dol.gov, 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.

(E) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs (a)(1)(iii)(C) and (D) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe

benefits where appropriate) determined pursuant to paragraph (a)(1)(iii)(C) or (D) of this section must 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.

- (iv) **Fringe benefits not expressed as an hourly rate.** 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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (v) **Unfunded plans.** 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, in accordance with the criteria set forth in § 5.28, 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.
- (vi) **Interest.** In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

(2) **Withholding —**

- (i) **Withholding requirements.** The [write in name of Federal agency or the recipient of Federal assistance] may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in paragraph (a) of this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work (or otherwise working in construction or development of the project under a development statute) all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph (a)(3)(iv) of this section, the [Agency] may on its own initiative and after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, 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.
- (ii) **Priority to withheld funds.** The Department has priority to funds withheld or to be withheld in accordance with paragraph (a)(2)(i) or (b)(3)(i) of this section, or both, over claims to those funds by:
 - (A) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

- (B) A contracting agency for its reprourement costs;
- (C) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (D) A contractor's assignee(s);
- (E) A contractor's successor(s); or
- (F) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

(3) **Records and certified payrolls –**

(i) **Basic record requirements –**

- (A) **Length of record retention.** All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.
- (B) **Information required.** Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.
- (C) **Additional records relating to fringe benefits.** Whenever the Secretary of Labor has found under paragraph (a)(1)(v) of this section 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.
- (D) **Additional records relating to apprenticeship.** Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

(ii) **Certified payroll requirements –**

- (A) **Frequency and method of submission.** The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the [write in name of appropriate Federal agency] if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the certified payrolls to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to the [write in name of agency]. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors.

A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(B) **Information required.** The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph (a)(3)(i)(B) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WH/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the sponsoring government agency (or the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records).

(C) **Statement of Compliance.** Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

- (1) That the certified payroll for the payroll period contains the information required to be provided under paragraph (a)(3)(ii) of this section, the appropriate information and basic records are being maintained under paragraph (a)(3)(i) of this section, and such information and records are correct and complete;
- (2) That each laborer or mechanic (including each helper and apprentice) working 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 29 CFR part 3; and
- (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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

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

- (E) **Signature.** The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.
 - (F) **Falsification.** The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.
 - (G) **Length of certified payroll retention.** The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.
- (iii) **Contracts, subcontracts, and related documents.** The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.
- (iv) **Required disclosures and access —**
- (A) **Required record disclosures and access to workers.** The contractor or subcontractor must make the records required under paragraphs (a)(3)(i) through (iii) of this section, and any other documents that the [write the name of the agency] or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the [write the name of the agency] or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.
 - (B) **Sanctions for non-compliance with records and worker access requirements.** If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.
 - (C) **Required information disclosures.** Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the [write in name of appropriate Federal agency] if the agency is a party to the contract, or to the Wage and Hour Division of the Department of Labor. If the Federal agency is not such a party to the

contract, the contractor, subcontractor, or both, must, upon request, provide the full Social Security number and last known address, telephone number, and email address of each covered worker to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to the [write in name of agency], the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

(4) ***Apprentices and equal employment opportunity*** –

(i) ***Apprentices*** –

- (A) ***Rate of pay.*** Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (B) ***Fringe benefits.*** Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.
- (C) ***Apprenticeship ratio.*** The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph (a)(4)(i)(D) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph (a)(4)(i)(A) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.
- (D) ***Reciprocity of ratios and wage rates.*** Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

- (ii) **Equal employment opportunity.** The use of apprentices and journeymen under this part must 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 must insert in any subcontracts the clauses contained in paragraphs (a)(1) through (11) of this section, along with the applicable wage determination(s) and such other clauses or contract modifications as the [write in the name of the Federal agency] may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate.
- (7) **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 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 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 40 U.S.C. 3144(b) or § 5.12(a).
 - (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).
 - (iii) The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.
- (11) **Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:
 - (i) Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

- (ii) Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;
- (iii) Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or
- (iv) Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

(b) **Contract Work Hours and Safety Standards Act (CWHSSA).** The Agency Head must cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1) through (5) of this section in full, or (for contracts covered by the Federal Acquisition Regulation) by reference, in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses must be inserted in addition to the clauses required by paragraph (a) of this section or 29 CFR 4.6. As used in this paragraph (b), the terms "laborers and mechanics" include watchpersons and guards.

- (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 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 (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$33 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 (b)(1).
- (3) **Withholding for unpaid wages and liquidated damages –**
 - (i) **Withholding process.** The [write in the name of the Federal agency or the recipient of Federal assistance] may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this paragraph (b) on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours

and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

(ii) **Priority to withheld funds.** The Department has priority to funds withheld or to be withheld in accordance with paragraph (a)(2)(i) or (b)(3)(i) of this section, or both, over claims to those funds by:

- (A) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (B) A contracting agency for its reprocurement costs;
- (C) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (D) A contractor's assignee(s);
- (E) A contractor's successor(s); or
- (F) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

(4) **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs (b)(1) through (5) of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (5). In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

(5) **Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- (i) Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;
- (ii) Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;
- (iii) Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or
- (iv) Informing any other person about their rights under CWHSSA or this part.

(c) **CWHSSA required records clause.** In addition to the clauses contained in paragraph (b) of this section, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other laws referenced by § 5.1, the Agency Head must cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor must maintain regular payrolls and other basic records during the course of the work and must preserve them for a period of 3 years after all the work on

the prime contract is completed for all laborers and mechanics, including guards and watchpersons, working on the contract. Such records must contain the name; last known address, telephone number, and email address; and social security number of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid; daily and weekly number of hours actually worked; deductions made; and actual wages paid. Further, the Agency Head must cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph must be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview workers during working hours on the job.

- (d) ***Incorporation of contract clauses and wage determinations by reference.*** Although agencies are required to insert the contract clauses set forth in this section, along with appropriate wage determinations, in full into covered contracts, and contractors and subcontractors are required to insert them in any lower-tier subcontracts, the incorporation by reference of the required contract clauses and appropriate wage determinations will be given the same force and effect as if they were inserted in full text.
- (e) ***Incorporation by operation of law.*** The contract clauses set forth in this section (or their equivalent under the Federal Acquisition Regulation), along with the correct wage determinations, will be considered to be a part of every prime contract required by the applicable statutes referenced by § 5.1 to include such clauses, and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Administrator grants a variance, tolerance, or exemption from the application of this paragraph. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

(The information collection, recordkeeping, and reporting requirements contained in the following paragraphs of this section were approved by the Office of Management and Budget:

Paragraph	OMB Control No.
(a)(1)(ii)(B)	1235-0023
(a)(1)(ii)(C)	1235-0023
(a)(1)(iv)	1235-0023
(a)(3)(i)	1235-0023
(a)(3)(ii)(A)	1235-0023
	1235-0008
(c)	1235-0023

[48 FR 19540, Apr. 29, 1983, as amended at 51 FR 12265, Apr. 9, 1986; 55 FR 50150, Dec. 4, 1990; 57 FR 28776, June 26, 1992; 58 FR 58955, Nov. 5, 1993; 61 FR 40716, Aug. 5, 1996; 65 FR 69693, Nov. 20, 2000; 73 FR 77511, Dec. 19, 2008; 81 FR 43450, July 1, 2016; 82 FR 2225, 2226, Jan. 9, 2017; 83 FR 12, Jan 2, 2018; 84 FR 218, Jan. 23, 2019; 87 FR 2334, Jan. 14, 2022; 88 FR 2215, Jan. 13, 2023; 88 FR 57734, Aug. 23, 2023; 89 FR 1815, Jan. 11, 2024; 90 FR 1859, Jan. 10, 2025]

§ 5.6 Enforcement.

(a) Agency responsibilities.

(1)

- (i) The Federal agency has the initial responsibility to ascertain whether the clauses required by § 5.5 and the appropriate wage determination(s) have been incorporated into the contracts subject to the labor standards provisions of the laws referenced by § 5.1. Additionally, a Federal agency that provides Federal financial assistance that is subject to the labor standards provisions of the Act must promulgate the necessary regulations or procedures to require the recipient or sub-recipient of the Federal assistance to insert in its contracts the provisions of § 5.5. No payment, advance, grant, loan, or guarantee of funds will be approved by the Federal agency unless it ensures that the clauses required by § 5.5 and the appropriate wage determination(s) are incorporated into such contracts. Furthermore, no payment, advance, grant, loan, or guarantee of funds will be approved by the Federal agency after the beginning of construction unless there is on file with the Federal agency a certification by the contractor that the contractor and its subcontractors have complied with the provisions of § 5.5 or unless there is on file with the Federal agency a certification by the contractor that there is a substantial dispute with respect to the required provisions.
- (ii) If a contract subject to the labor standards provisions of the applicable statutes referenced by § 5.1 is entered into without the incorporation of the clauses required by § 5.5, the agency must, upon the request of the Administrator or upon its own initiative, either terminate and resolicit the contract with the required contract clauses, or incorporate the required clauses into the contract (or ensure they are so incorporated) through supplemental agreement, change order, or any and all authority that may be needed. Where an agency has not entered directly into such a contract but instead has provided Federal financial assistance, the agency must ensure that the recipient or sub-recipient of the Federal assistance similarly incorporates the clauses required into its contracts. The method of incorporation of the correct wage determination, and adjustment in contract price, where appropriate, should be in accordance with applicable law. Additionally, the following requirements apply:
 - (A) Unless the Administrator directs otherwise, the incorporation of the clauses required by § 5.5 must be retroactive to the date of contract award or start of construction if there is no award.
 - (B) If this incorporation occurs as the result of a request from the Administrator, the incorporation must take place within 30 days of the date of that request, unless the agency has obtained an extension from the Administrator.
 - (C) The contractor must be compensated for any increases in wages resulting from incorporation of a missing contract clause.
 - (D) If the recipient refuses to incorporate the clauses as required, the agency must make no further payment, advance, grant, loan, or guarantee of funds in connection with the contract until the recipient incorporates the required clauses into its contract, and must promptly refer the dispute to the Administrator for further proceedings under § 5.13.

- (E) Before terminating a contract pursuant to this section, the agency must withhold or cross-withhold sufficient funds to remedy any back wage liability resulting from the failure to incorporate the correct wage determination or otherwise identify and obligate sufficient funds through a termination settlement agreement, bond, or other satisfactory mechanism.
- (F) Notwithstanding the requirement to incorporate the contract clauses and correct wage determination within 30 days, the contract clauses and correct wage determination will be effective by operation of law, retroactive to the beginning of construction, in accordance with § 5.5(e).

(2)

- (i) Certified payrolls submitted pursuant to § 5.5(a)(3)(ii) must be preserved by the Federal agency for a period of 3 years after all the work on the prime contract is completed, and must be produced at the request of the Department of Labor at any time during the 3-year period, regardless of whether the Department of Labor has initiated an investigation or other compliance action.
- (ii) In situations where the Federal agency does not itself maintain certified payrolls required to be submitted pursuant to § 5.5(a)(3)(ii), upon the request of the Department of Labor the Federal agency must ensure that such certified payrolls are provided to the Department of Labor. Such certified payrolls may be provided by the applicant, sponsor, owner, or other entity, as the case may be, directly to the Department of Labor, or to the Federal agency which, in turn, must provide those records to the Department of Labor.

- (3) The Federal agency will cause such investigations to be made as may be necessary to assure compliance with the labor standards clauses required by § 5.5 and the applicable statutes referenced in § 5.1. Investigations will be made of all contracts with such frequency as may be necessary to assure compliance. Such investigations will include interviews with workers, which must be taken in confidence, and examinations of certified payrolls, regular payrolls, and other basic records required to be maintained under § 5.5(a)(3). In making such examinations, particular care must be taken to determine the correctness of classification(s) of work actually performed, and to determine whether there is a disproportionate amount of work by laborers and of apprentices registered in approved programs. Such investigations must also include evidence of fringe benefit plans and payments thereunder. Federal agencies must give priority to complaints of alleged violations.
- (4) In accordance with normal operating procedures, the contracting agency may be furnished various investigatory material from the investigation files of the Department of Labor. None of the material, other than computations of back wages, liquidated damages, and monetary relief for violations of § 5.5(a)(11) or (b)(5), and the summary of back wages due, may be disclosed in any manner to anyone other than Federal officials charged with administering the contract or program providing Federal assistance to the contract, without requesting the permission and views of the Department of Labor.

(b) *Department of Labor investigations and other compliance actions.*

- (1) The Administrator will investigate and conduct other compliance actions as deemed necessary in order to obtain compliance with the labor standards provisions of the applicable statutes referenced by § 5.1, or to affirm or reject the recommendations by the Agency Head with respect to labor standards matters arising under the statutes referenced by § 5.1.

- (2) Federal agencies, contractors, subcontractors, sponsors, applicants, owners, or other entities, as the case may be, must cooperate with any authorized representative of the Department of Labor in the inspection of records, in interviews with workers, and in all other aspects of the investigations or other compliance actions.
- (3) The findings of such an investigation or other compliance action, including amounts found due, may not be altered or reduced without the approval of the Department of Labor.
- (4) Where the underpayments disclosed by such an investigation or other compliance action total \$1,000 or more, where there is reason to believe that the contractor or subcontractor has disregarded its obligations to workers or subcontractors, or where liquidated damages may be assessed under CWHSSA, the Department of Labor will furnish the Federal agency an enforcement report detailing the labor standards violations disclosed by the investigation or other compliance action and any action taken by the contractor or subcontractor to correct the violations, including any payment of back wages or any other relief provided workers or remedial actions taken for violations of § 5.5(a)(11) or (b)(5). In other circumstances, the Department of Labor will furnish the Federal agency a notification summarizing the findings of the investigation or other compliance action.
- (c) **Confidentiality requirements.** It is the policy of the Department of Labor to protect from disclosure the identity of its confidential sources and to prevent an unwarranted invasion of personal privacy. Accordingly, the identity of a worker or other informant who makes a written or oral statement as a complaint or in the course of an investigation or other compliance action, as well as portions of the statement which would tend to reveal the identity of the informant, will not be disclosed in any manner to anyone other than Federal officials without the prior consent of the informant. Disclosure of such statements is also governed by the provisions of the "Freedom of Information Act" (5 U.S.C. 552, see part 70 of this subtitle) and the "Privacy Act of 1974" (5 U.S.C. 552a, see part 71 of this subtitle).

[88 FR 57739, Aug. 23, 2023]

§ 5.7 Reports to the Secretary of Labor.

- (a) **Enforcement reports.**
 - (1) Where underpayments by a contractor or subcontractor total less than \$1,000, where there is no reason to believe that the contractor or subcontractor has disregarded its obligations to workers or subcontractors, and where restitution has been effected and future compliance assured, the Federal agency need not submit its investigative findings and recommendations to the Administrator, unless the investigation or other compliance action was made at the request of the Department of Labor. In the latter case, the Federal agency will submit a factual summary report detailing any violations including any data on the amount of restitution paid, the number of workers who received restitution, liquidated damages assessed under the Contract Work Hours and Safety Standards Act, corrective measures taken (such as "letters of notice" or remedial action taken for violations of § 5.5(a)(11) or (b)(5)), and any information that may be necessary to review any recommendations for an appropriate adjustment in liquidated damages under § 5.8.
 - (2) Where underpayments by a contractor or subcontractor total \$1,000 or more, or where there is reason to believe that the contractor or subcontractor has disregarded its obligations to workers or subcontractors, the Federal agency will furnish within 60 days after completion of its investigation, a detailed enforcement report to the Administrator.

- (b) ***Semi-annual enforcement reports.*** To assist the Secretary in fulfilling the responsibilities under Reorganization Plan No. 14 of 1950, Federal agencies shall furnish to the Administrator by April 30 and October 31 of each calendar year semi-annual reports on compliance with and enforcement of the labor standards provisions of the Davis-Bacon Act and its related acts covering the periods of October 1 through March 31 and April 1 through September 30, respectively. Such reports shall be prepared in the manner prescribed in memoranda issued to Federal agencies by the Administrator. This report has been cleared in accordance with FPMR 101-11.11 and assigned interagency report control number 1482-DOL-SA.
- (c) ***Additional information.*** Upon request, the Agency Head shall transmit to the Administrator such information available to the Agency with respect to contractors and subcontractors, their contracts, and the nature of the contract work as the Administrator may find necessary for the performance of his or her duties with respect to the labor standards provisions referred to in this part.
- (d) ***Contract termination.*** Where a contract is terminated by reason of violations of the labor standards provisions of the statutes listed in § 5.1, a report shall be submitted promptly to the Administrator and to the Comptroller General (if the contract is subject to the Davis-Bacon Act), giving the name and address of the contractor or subcontractor whose right to proceed has been terminated, and the name and address of the contractor or subcontractor, if any, who is to complete the work, the amount and number of the contract, and the description of the work to be performed.

[48 FR 19540, Apr. 29, 1983, as amended at 88 FR 57734, Aug. 23, 2023]

§ 5.8 Liquidated damages under the Contract Work Hours and Safety Standards Act.

- (a) The Contract Work Hours and Safety Standards Act requires that laborers or mechanics shall be paid wages 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 any workweek. In the event of violation of this provision, the contractor and any subcontractor shall be liable for the unpaid wages and in addition for liquidated damages, computed with respect to each laborer or mechanic employed in violation of the Act in the amount of \$33 for each calendar day in the workweek on which such individual was required or permitted to work in excess of forty hours without payment of required overtime wages. Any contractor or subcontractor aggrieved by the withholding of liquidated damages shall have the right to appeal to the head of the agency of the United States (or the territory of District of Columbia, as appropriate) for which the contract work was performed or for which financial assistance was provided.
- (b) ***Findings and recommendations of the Agency Head.*** The Agency Head has the authority to review the administrative determination of liquidated damages and to issue a final order affirming the determination. It is not necessary to seek the concurrence of the Administrator but the Administrator shall be advised of the action taken. Whenever the Agency Head finds that a sum of liquidated damages administratively determined to be due is incorrect or that the contractor or subcontractor violated inadvertently the provisions of the Act notwithstanding the exercise of due care upon the part of the contractor or subcontractor involved, and the amount of the liquidated damages computed for the contract is in excess of \$500, the Agency Head may make recommendations to the Secretary that an appropriate adjustment in liquidated damages be made or that the contractor or subcontractor be relieved of liability for such liquidated damages. Such findings with respect to liquidated damages shall include findings with respect to any wage underpayments for which the liquidated damages are determined.

- (c) The recommendations of the Agency Head for adjustment or relief from liquidated damages under paragraph (a) of this section shall be reviewed by the Administrator or an authorized representative who shall issue an order concurring in the recommendations, partially concurring in the recommendations, or rejecting the recommendations, and the reasons therefor. The order shall be the final decision of the Department of Labor, unless a petition for review is filed pursuant to part 7 of this title, and the Administrative Review Board in its discretion reviews such decision and order; or, with respect to contracts subject to the Service Contract Act, unless petition for review is filed pursuant to part 8 of this title, and the Administrative Review Board in its discretion reviews such decision and order.
- (d) Whenever the Agency Head finds that a sum of liquidated damages administratively determined to be due under section 104(a) of the Contract Work Hours and Safety Standards Act for a contract is \$500 or less and the Agency Head finds that the sum of liquidated damages is incorrect or that the contractor or subcontractor violated inadvertently the provisions of the Contract Work Hours and Safety Standards Act notwithstanding the exercise of due care upon the part of the contractor or subcontractor involved, an appropriate adjustment may be made in such liquidated damages or the contractor or subcontractor may be relieved of liability for such liquidated damages without submitting recommendations to this effect or a report to the Department of Labor. This delegation of authority is made under section 105 of the Contract Work Hours and Safety Standards Act and has been found to be necessary and proper in the public interest to prevent undue hardship and to avoid serious impairment of the conduct of Government business.

[48 FR 19541, Apr. 29, 1983, as amended at 51 FR 12265, Apr. 9, 1986; 51 FR 13496, Apr. 21, 1986; 81 FR 43450, July 1, 2016; 83 FR 12, Jan. 2, 2018; 84 FR 218, Jan. 23, 2019; 87 FR 2334, Jan. 14, 2022; 88 FR 2215, Jan. 13, 2023; 89 FR 1815, Jan. 11, 2024; 90 FR 1859, Jan. 10, 2025]

§ 5.9 Suspension of funds.

- (a) **Suspension and withholding.** In the event of failure or refusal of the contractor or any subcontractor to comply with the applicable statutes referenced by § 5.1 and the labor standards clauses contained in § 5.5, whether incorporated into the contract physically, by reference, or by operation of law, the Federal agency (and any other agency), may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, take such action as may be necessary to cause the suspension of the payment, advance, or guarantee of funds until such time as the violations are discontinued and/or until sufficient funds are withheld as may be considered necessary to compensate workers for the full amount of wages and monetary relief to which they are entitled, and to cover any liquidated damages and pre-judgment or post-judgment interest which may be due.
- (b) **Cross-withholding.** To satisfy a contractor's liability for back wages on a contract, in addition to the suspension and withholding of funds from the contract(s) under which the violation(s) occurred, the necessary funds also may be withheld under any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards and/or the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency.
- (c) **Cross-withholding from different legal entities.** Cross-withholding of funds may be requested from contracts held by other entities that may be considered to be the same prime contractor as that term is defined in § 5.2. Such cross-withholding is appropriate where the separate legal entities have independently consented to it by entering into contracts containing the withholding provisions at § 5.5(a)(2) and (b)(3). Cross-withholding from a contract held by a different legal entity is not appropriate unless the withholding provisions were incorporated in full or by reference in that different legal entity's

contract. Absent exceptional circumstances, cross-withholding is not permitted from a contract held by a different legal entity where the Davis-Bacon labor standards were incorporated only by operation of law into that contract.

[88 FR 57740, Aug. 23, 2023]

§ 5.10 Restitution, criminal action.

- (a) In cases other than those forwarded to the Attorney General of the United States under paragraph (b) of this section where violations of the labor standards clauses contained in § 5.5 and the applicable statutes referenced by § 5.1 result in underpayment of wages to workers or monetary damages caused by violations of § 5.5(a)(11) or (b)(5), the Federal agency or an authorized representative of the Department of Labor will request that restitution be made to such workers or on their behalf to plans, funds, or programs for any type of bona fide fringe benefits within the meaning of 40 U.S.C. 3141(2)(B), including interest from the date of the underpayment or loss. Interest on any back wages or monetary relief provided for in this part will be calculated using the percentage established for the underpayment of taxes under 26 U.S.C. 6621 and will be compounded daily.
- (b) In cases where the Agency Head or the Administrator finds substantial evidence that such violations are willful and in violation of a criminal statute, the matter will be forwarded to the Attorney General of the United States for prosecution if the facts warrant. In all such cases the Administrator will be informed simultaneously of the action taken.

[88 FR 57741, Aug. 23, 2023]

§ 5.11 Disputes concerning payment of wages.

- (a) This section sets forth the procedure for resolution of disputes of fact or law concerning payment of prevailing wage rates, overtime pay, proper classification, or monetary relief for violations of § 5.5(a)(11) or (b)(5). The procedures in this section may be initiated upon the Administrator's own motion, upon referral of the dispute by a Federal agency pursuant to § 5.5(a)(9), or upon request of the contractor or subcontractor.
- (b)
 - (1) In the event of a dispute described in paragraph (a) of this section in which it appears that relevant facts are at issue, the Administrator will notify the affected contractor and subcontractor, if any, by registered or certified mail to the last known address or by any other means normally assuring delivery, of the investigation findings. If the Administrator determines that there is reasonable cause to believe that either the contractor, the subcontractor, or both, should also be subject to debarment under the Davis-Bacon Act or any of the other applicable statutes referenced by § 5.1, the notification will so indicate.
 - (2) A contractor or subcontractor desiring a hearing concerning the Administrator's investigation findings must request such a hearing by letter or by any other means normally assuring delivery, sent within 30 days of the date of the Administrator's notification. The request must set forth those findings which are in dispute and the reasons therefor, including any affirmative defenses.

- (3) Upon receipt of a timely request for a hearing, the Administrator will refer the case to the Chief Administrative Law Judge by Order of Reference, with an attached copy of the notification from the Administrator and the response of the contractor or subcontractor, for designation of an Administrative Law Judge to conduct such hearings as may be necessary to resolve the disputed matters. The hearings will be conducted in accordance with the procedures set forth in part 6 of this subtitle.

(c)

- (1) In the event of a dispute described in paragraph (a) of this section in which it appears that there are no relevant facts at issue, and where there is not at that time reasonable cause to institute debarment proceedings under § 5.12, the Administrator will notify the contractor and subcontractor, if any, by registered or certified mail to the last known address or by any other means normally assuring delivery, of the investigation findings, and will issue a ruling on any issues of law known to be in dispute.

(2)

- (i) If the contractor or subcontractor disagrees with the factual findings of the Administrator or believes that there are relevant facts in dispute, the contractor or subcontractor must advise the Administrator by letter or by any other means normally assuring delivery, sent within 30 days of the date of the Administrator's notification. In the response, the contractor or subcontractor must explain in detail the facts alleged to be in dispute and attach any supporting documentation.
- (ii) Upon receipt of a response under paragraph (c)(2)(i) of this section alleging the existence of a factual dispute, the Administrator will examine the information submitted. If the Administrator determines that there is a relevant issue of fact, the Administrator will refer the case to the Chief Administrative Law Judge in accordance with paragraph (b)(3) of this section. If the Administrator determines that there is no relevant issue of fact, the Administrator will so rule and advise the contractor and subcontractor, if any, accordingly.
- (3) If the contractor or subcontractor desires review of the ruling issued by the Administrator under paragraph (c)(1) or (2) of this section, the contractor or subcontractor must file a petition for review thereof with the Administrative Review Board within 30 days of the date of the ruling, with a copy thereof to the Administrator. The petition for review must be filed in accordance with part 7 of this subtitle.
- (d) If a timely response to the Administrator's findings or ruling is not made or a timely petition for review is not filed, the Administrator's findings or ruling will be final, except that with respect to debarment under the Davis-Bacon Act, the Administrator will advise the Comptroller General of the Administrator's recommendation in accordance with § 5.12(a)(2). If a timely response or petition for review is filed, the findings or ruling of the Administrator will be inoperative unless and until the decision is upheld by the Administrative Law Judge or the Administrative Review Board.

[88 FR 57741, Aug. 23, 2023]

§ 5.12 Debarment proceedings.

- (a) *Debarment standard and ineligible list.*

- (1) Whenever any contractor or subcontractor is found by the Secretary of Labor to have disregarded their obligations to workers or subcontractors under the Davis-Bacon Act, any of the other applicable statutes referenced by § 5.1, this part, or part 3 of this subtitle, such contractor or subcontractor and their responsible officers, if any, and any firm, corporation, partnership, or association in which such contractor, subcontractor, or responsible officer has an interest will be ineligible for a period of 3 years to be awarded any contract or subcontract of the United States or the District of Columbia and any contract or subcontract subject to the labor standards provisions of any of the statutes referenced by § 5.1.
- (2) In cases arising under contracts covered by the Davis-Bacon Act, the Administrator will transmit to the Comptroller General the name(s) of the contractors or subcontractors and their responsible officers, if any, and any firms, corporations, partnerships, or associations in which the contractors, subcontractors, or responsible officers are known to have an interest, who have been found to have disregarded their obligations to workers or subcontractors, and the recommendation of the Secretary of Labor or authorized representative regarding debarment. In cases arising under contracts covered by any of the applicable statutes referenced by § 5.1 other than the Davis-Bacon Act, the Administrator determines the name(s) of the contractors or subcontractors and their responsible officers, if any, and any firms, corporations, partnerships, or associations in which the contractors, subcontractors, or responsible officers are known to have an interest, to be debarred. The names of such ineligible persons or firms will be published on SAM or its successor website, and an ineligible person or firm will be ineligible for a period of 3 years from the date of publication of their name on the ineligible list, to be awarded any contract or subcontract of the United States or the District of Columbia and any contract or subcontract subject to the labor standards provisions of any of the statutes referenced by § 5.1.

(b) **Procedure.**

- (1) In addition to cases under which debarment action is initiated pursuant to § 5.11, whenever as a result of an investigation conducted by the Federal agency or the Department of Labor, and where the Administrator finds reasonable cause to believe that a contractor or subcontractor has committed violations which constitute a disregard of its obligations to workers or subcontractors under the Davis-Bacon Act, the labor standards provisions of any of the other applicable statutes referenced by § 5.1, this part, or part 3 of this subtitle, the Administrator will notify by registered or certified mail to the last known address or by any other means normally assuring delivery, the contractor or subcontractor and responsible officers, if any, and any firms, corporations, partnerships, or associations in which the contractors, subcontractors, or responsible officers are known to have an interest of the finding.
 - (i) The Administrator will afford such contractor, subcontractor, responsible officer, and any other parties notified an opportunity for a hearing as to whether debarment action should be taken under paragraph (a) of this section. The Administrator will furnish to those notified a summary of the investigative findings.
 - (ii) If the contractor, subcontractor, responsible officer, or any other parties notified wish to request a hearing as to whether debarment action should be taken, such a request must be made by letter or by any other means normally assuring delivery, sent within 30 days of the date of the notification from the Administrator, and must set forth any findings which are in dispute and the basis for such disputed findings, including any affirmative defenses to be raised.

(iii) Upon timely receipt of such request for a hearing, the Administrator will refer the case to the Chief Administrative Law Judge by Order of Reference, with an attached copy of the notification from the Administrator and the responses of the contractor, subcontractor, responsible officers, or any other parties notified, for designation of an Administrative Law Judge to conduct such hearings as may be necessary to determine the matters in dispute.

(iv) In considering debarment under any of the statutes referenced by § 5.1 other than the Davis-Bacon Act, the Administrative Law Judge will issue an order concerning whether the contractor, subcontractor, responsible officer, or any other party notified is to be debarred in accordance with paragraph (a) of this section. In considering debarment under the Davis-Bacon Act, the Administrative Law Judge will issue a recommendation as to whether the contractor, subcontractor, responsible officers, or any other party notified should be debarred under 40 U.S.C. 3144(b).

(2) Hearings under this section will be conducted in accordance with part 6 of this subtitle. If no hearing is requested within 30 days of the date of the notification from the Administrator, the Administrator's findings will be final, except with respect to recommendations regarding debarment under the Davis-Bacon Act, as set forth in paragraph (a)(2) of this section.

(c) ***Interests of debarred parties.***

(1) A finding as to whether persons or firms whose names appear on the ineligible list have an interest under 40 U.S.C. 3144(b) or paragraph (a) of this section in any other firm, corporation, partnership, or association, may be made through investigation, hearing, or otherwise.

(2)

(i) The Administrator, on their own motion or after receipt of a request for a determination pursuant to paragraph (c)(3) of this section, may make a finding on the issue of interest.

(ii) If the Administrator determines that there may be an interest but finds that there is insufficient evidence to render a final ruling thereon, the Administrator may refer the issue to the Chief Administrative Law Judge in accordance with paragraph (c)(4) of this section.

(iii) If the Administrator finds that no interest exists, or that there is not sufficient information to warrant the initiation of an investigation, the requesting party, if any, will be so notified and no further action taken.

(iv)

(A) If the Administrator finds that an interest exists, the person or firm affected will be notified of the Administrator's finding (by certified mail to the last known address or by any other means normally assuring delivery), which will include the reasons therefore, and such person or firm will be afforded an opportunity to request that a hearing be held to decide the issue.

(B) Such person or firm will have 20 days from the date of the Administrator's ruling to request a hearing. A person or firm desiring a hearing must request it by letter or by any other means normally assuring delivery, sent within 20 days of the date of the Administrator's notification. A detailed statement of the reasons why the Administrator's ruling is in error, including facts alleged to be in dispute, if any, must be submitted with the request for a hearing.

- (C) If no hearing is requested within the time mentioned in paragraph (c)(2)(iv)(B) of this section, the Administrator's finding will be final and the Administrator will notify the Comptroller General in cases arising under the DBA. If a hearing is requested, the ruling of the Administrator will be inoperative unless and until the Administrative Law Judge or the Administrative Review Board issues an order that there is an interest.
- (3)
- (i) A request for a determination of interest may be made by any interested party, including contractors or prospective contractors and associations of contractors, representatives of workers, and interested agencies. Such a request must be submitted in writing to the Administrator, Wage and Hour Division, U.S. Department of Labor, 200 Constitution Avenue NW, Washington, DC 20210.
- (ii) The request must include a statement setting forth in detail why the petitioner believes that a person or firm whose name appears on the ineligible list has an interest in any firm, corporation, partnership, or association that is seeking or has been awarded a contract or subcontract of the United States or the District of Columbia, or a contract or subcontract that is subject to the labor standards provisions of any of the statutes referenced by § 5.1. No particular form is prescribed for the submission of a request under this section.
- (4) The Administrator, on their own motion under paragraph (c)(2)(ii) of this section or upon a request for hearing where the Administrator determines that relevant facts are in dispute, will by order refer the issue to the Chief Administrative Law Judge, for designation of an Administrative Law Judge who will conduct such hearings as may be necessary to render a decision solely on the issue of interest. Such proceedings must be conducted in accordance with the procedures set forth in part 6 of this subtitle.
- (5) If the person or firm affected requests a hearing and the Administrator determines that relevant facts are not in dispute, the Administrator will refer the issue and the record compiled thereon to the Administrative Review Board to render a decision solely on the issue of interest. Such proceeding must be conducted in accordance with the procedures set forth in part 7 of this subtitle.

[88 FR 57741, Aug. 23, 2023]

§ 5.13 Rulings and interpretations.

- (a) All questions relating to the application and interpretation of wage determinations (including the classifications therein) issued pursuant to part 1 of this subtitle, of the rules contained in this part and in parts 1 and 3 of this subtitle, and of the labor standards provisions of any of the laws referenced in § 5.1 must be referred to the Administrator for appropriate ruling or interpretation. These rulings and interpretations are authoritative and those under the Davis-Bacon Act may be relied upon as provided for in section 10 of the Portal-to-Portal Act of 1947 (29 U.S.C. 259). Requests for such rulings and interpretations should be submitted via email to dgceinquiries@dol.gov; by mail to Administrator, Wage and Hour Division, U.S. Department of Labor, 200 Constitution Ave., NW, Washington, DC 20210; or through other means directed by the Administrator.
- (b) If any such ruling or interpretation is made by an authorized representative of the Administrator of the Wage and Hour Division, any interested party may seek reconsideration of the ruling or interpretation by the Administrator of the Wage and Hour Division. The procedures and time limits set out in § 1.8 of this subtitle apply to any such request for reconsideration.

[88 FR 57743, Aug. 23, 2023]

§ 5.14 Variations, tolerances, and exemptions from parts 1 and 3 of this subtitle and this part.

The Secretary of Labor may make variations, tolerances, and exemptions from the regulatory requirements of this part and those of parts 1 and 3 of this subtitle whenever the Secretary finds that such action is necessary and proper in the public interest or to prevent injustice and undue hardship. Variations, tolerances, and exemptions may not be made from the statutory requirements of any of the statutes listed in § 5.1 unless the statute specifically provides such authority.

§ 5.15 Limitations, variations, tolerances, and exemptions under the Contract Work Hours and Safety Standards Act.

- (a) **General.** Upon his or her own initiative or upon the request of any Federal agency, the Secretary of Labor may provide under section 105 of the Contract Work Hours and Safety Standards Act reasonable limitations and allow variations, tolerances, and exemptions to and from any or all provisions of that Act whenever the Secretary finds such action to be necessary and proper in the public interest to prevent injustice, or undue hardship, or to avoid serious impairment of the conduct of Government business. Any request for such action by the Secretary shall be submitted in writing, and shall set forth the reasons for which the request is made.
- (b) **Exemptions.** Pursuant to section 105 of the Contract Work Hours and Safety Standards Act, the following classes of contracts are found exempt from all provisions of that Act in order to prevent injustice, undue hardship, or serious impairment of Government business:
 - (1) Contract work performed in a workplace within a foreign country or within territory under the jurisdiction of the United States other than the following: A State of the United States; the District of Columbia; Puerto Rico; the Virgin Islands; Outer Continental Shelf lands defined in the Outer Continental Shelf Lands Act (ch. 345, 67 Stat. 462); American Samoa; Guam; Wake Island; Eniwetok Atoll; Kwajalein Atoll; and Johnston Island.
 - (2) Agreements entered into by or on behalf of the Commodity Credit Corporation providing for the storing in or handling by commercial warehouses of wheat, corn, oats, barley, rye, grain sorghums, soybeans, flaxseed, rice, naval stores, tobacco, peanuts, dry beans, seeds, cotton, and wool.
 - (3) Sales of surplus power by the Tennessee Valley Authority to States, counties, municipalities, cooperative organization of citizens or farmers, corporations and other individuals pursuant to section 10 of the Tennessee Valley Authority Act of 1933 (16 U.S.C. 8311).
- (c) **Tolerances.**
 - (1) The "basic rate of pay" under section 102 of the Contract Work Hours and Safety Standards Act may be computed as an hourly equivalent to the rate on which time-and-one-half overtime compensation may be computed and paid under section 7 of the Fair Labor Standards Act of 1938, as amended (29 U.S.C. 207), as interpreted in part 778 of this title. This tolerance is found to be necessary and proper in the public interest in order to prevent undue hardship.
 - (2) Concerning the tolerance provided in paragraph (c)(1) of this section, the provisions of section 7(d)(2) of the Fair Labor Standards Act and § 778.7 of this title should be noted. Under these provisions, payments for occasional periods when no work is performed, due to vacations, and

similar causes are excludable from the "regular rate" under the Fair Labor Standards Act. Such payments, therefore, are also excludable from the "basic rate" under the Contract Work Hours and Safety Standards Act.

- (3) See § 5.8(c) providing a tolerance subdelegating authority to the heads of agencies to make appropriate adjustments in the assessment of liquidated damages totaling \$500 or less under specified circumstances.

(4)

- (i) Time spent in an organized program of related, supplemental instruction by laborers or mechanics employed under bona fide apprenticeship programs may be excluded from working time if the criteria prescribed in paragraphs (c)(4)(ii) and (iii) of this section are met.
- (ii) The apprentice comes within the definition contained in § 5.2.
- (iii) The time in question does not involve productive work or performance of the apprentice's regular duties.

(d) **Variations.**

- (1) In the event of failure or refusal of the contractor or any subcontractor to comply with overtime pay requirements of the Contract Work Hours and Safety Standards Act, if the funds withheld by Federal agencies for the violations are not sufficient to pay fully the unpaid wages and any back pay or other monetary relief due laborers and mechanics, with interest, and the liquidated damages due the United States, the available funds will be used first to compensate the laborers and mechanics for the wages to which they are entitled (or an equitable portion thereof when the funds are not adequate for this purpose); and the balance, if any, will be used for the payment of liquidated damages.
- (2) In the performance of any contract entered into pursuant to the provisions of 38 U.S.C. 620 to provide nursing home care of veterans, no contractor or subcontractor under such contract shall be deemed in violation of section 102 of the Contract Work Hours and Safety Standards Act by virtue of failure to pay the overtime wages required by such section for work in excess of 40 hours in the workweek to any individual employed by an establishment which is an institution primarily engaged in the care of the sick, the aged, or the mentally ill or defective who reside on the premises if, pursuant to an agreement or understanding arrived at between the employer and the employee before performance of the work, a work period of 14 consecutive days is accepted in lieu of the workweek of 7 consecutive days for the purpose of overtime compensation and if such individual receives compensation for employment in excess of 8 hours in any workday and in excess of 80 hours in such 14-day period at a rate not less than 1½ times the regular rate at which the individual is employed, computed in accordance with the requirements of the Fair Labor Standards Act of 1938, as amended.
- (3) Any contractor or subcontractor performing on a government contract the principal purpose of which is the furnishing of fire fighting or suppression and related services, shall not be deemed to be in violation of section 102 of the Contract Work Hour and Safety Standards Act for failing to pay the overtime compensation required by section 102 of the Act in accordance with the basic rate of pay as defined in paragraph (c)(1) of this section, to any pilot or copilot of a fixed-wing or rotary-wing aircraft employed on such contract if:

- (i) Pursuant to a written employment agreement between the contractor and the employee which is arrived at before performance of the work.
 - (A) The employee receives gross wages of not less than \$300 per week regardless of the total number of hours worked in any workweek, and
 - (B) Within any workweek the total wages which an employee receives are not less than the wages to which the employee would have been entitled in that workweek if the employee were paid the minimum hourly wage required under the contract pursuant to the provisions of the Service Contract Act of 1965 and any applicable wage determination issued thereunder for all hours worked, plus an additional premium payment of one-half times such minimum hourly wage for all hours worked in excess of 40 hours in the workweek;
- (ii) The contractor maintains accurate records of the total daily and weekly hours of work performed by such employee on the government contract. In the event these conditions for the exemption are not met, the requirements of section 102 of the Contract Work Hours and Safety Standards Act shall be applicable to the contract from the date the contractor or subcontractor fails to satisfy the conditions until completion of the contract.

(Reporting and recordkeeping requirements in paragraph (d)(2) have been approved by the Office of Management and Budget under control numbers 1235-0023 and 1235-0018. Reporting and recordkeeping requirements in paragraph (d)(3)(ii) have been approved by the Office of Management and Budget under control number 1235-0018)

[48 FR 19541, Apr. 29, 1983, as amended at 51 FR 12265, Apr. 9, 1986; 61 FR 40716, Aug. 5, 1996; 82 FR 2226, Jan. 9, 2017; 88 FR 57743, Aug. 23, 2023]

§ 5.16 [Reserved]

§ 5.17 [Reserved]

§ 5.18 Remedies for retaliation.

- (a) **Administrator request to remedy violation.** When the Administrator finds that any person has discriminated in any way against any worker or job applicant in violation of § 5.5(a)(11) or (b)(5), or caused any person to discriminate in any way against any worker or job applicant in violation of § 5.5(a)(11) or (b)(5), the Administrator will notify the person, any contractors for whom the person worked or on whose behalf the person acted, and any upper tier contractors, as well as the relevant contracting agency(ies) of the discrimination and request that the person and any contractors for whom the person worked or on whose behalf the person acted remedy the violation.
- (b) **Administrator directive to remedy violation and provide make-whole relief.** If the person and any contractors for whom the person worked or on whose behalf the person acted do not remedy the violation, the Administrator in the notification of violation findings issued under § 5.11 or § 5.12 will direct the person and any contractors for whom the person worked or on whose behalf the person acted to provide appropriate make-whole relief to affected worker(s) and job applicant(s) or take appropriate remedial action, or both, to correct the violation, and will specify the particular relief and remedial actions to be taken.

- (c) **Examples of available make-whole relief and remedial actions.** Such relief and remedial actions may include, but are not limited to, employment, reinstatement, front pay in lieu of reinstatement, and promotion, together with back pay and interest; compensatory damages; restoration of the terms, conditions, and privileges of the worker's employment or former employment; the expungement of warnings, reprimands, or derogatory references; the provision of a neutral employment reference; and the posting of a notice to workers that the contractor or subcontractor agrees to comply with the Davis-Bacon Act and Related Acts anti-retaliation requirements.

[88 FR 57743, Aug. 23, 2023]

Subpart B—Interpretation of the Fringe Benefits Provisions of the Davis-Bacon Act

Source: 29 FR 13465, Sept. 30, 1964, unless otherwise noted.

§ 5.20 Scope and significance of this subpart.

The 1964 amendments (Pub. L. 88-349) to the Davis-Bacon Act require, among other things, that the prevailing wage determined for Federal and federally assisted construction include the basic hourly rate of pay and the amount contributed by the contractor or subcontractor for certain fringe benefits (or the cost to them of such benefits). The purpose of this subpart is to explain the provisions of these amendments and make available in one place official interpretations of the fringe benefits provisions of the Davis-Bacon Act. These interpretations will guide the Department of Labor in carrying out its responsibilities under these provisions. These interpretations are intended also to provide guidance to contractors and their associations; laborers and mechanics and their organizations; and local, State, and Federal agencies. The interpretations contained in this subpart are authoritative and may be relied upon as provided for in section 10 of the Portal-to-Portal Act of 1947 (29 U.S.C. 259). The omission to discuss a particular problem in this subpart or in interpretations supplementing it should not be taken to indicate the adoption of any position by the Secretary of Labor with respect to such problem or to constitute an administrative interpretation, practice, or enforcement policy. Questions on matters not fully covered by this subpart may be referred to the Secretary for interpretation as provided in § 5.13.

[88 FR 57743, Aug. 23, 2023]

§ 5.21 [Reserved]

§ 5.22 Effect of the Davis-Bacon fringe benefits provisions.

The Davis-Bacon Act and the prevailing wage provisions of the statutes referenced in § 1.1 of this subtitle confer upon the Secretary of Labor the authority to predetermine, as minimum wages, those wage rates found to be prevailing for corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the area in which the work is to be performed. See the definitions of the terms “prevailing wage” and “area” in § 1.2 of this subtitle. The fringe benefits amendments enlarge the scope of this authority by including certain bona fide fringe benefits within the meaning of the terms “wages”, “scale of wages”, “wage rates”, “minimum wages”, and “prevailing wages”, as used in the Davis-Bacon Act.

[88 FR 57744, Aug. 23, 2023]

§ 5.23 The statutory provisions.

Pursuant to the Davis-Bacon Act, as amended and codified at 40 U.S.C. 3141(2), the term “prevailing wages” and similar terms include the basic hourly rate of pay and, for the listed fringe benefits and other bona fide fringe benefits not required by other law, the contributions irrevocably made by a contractor or subcontractor to a trustee or third party pursuant to a bona fide fringe benefit fund, plan, or program, and the costs to the contractor or subcontractor that may be reasonably anticipated in providing bona fide fringe benefits pursuant to an enforceable commitment to carry out a financially responsible plan or program, which was communicated in writing to the affected laborers and mechanics. Section 5.29 discusses specific fringe benefits that may be considered to be bona fide.

[88 FR 57744, Aug. 23, 2023]

§ 5.24 The basic hourly rate of pay.

“The basic hourly rate of pay” is that part of a laborer's or mechanic's wages which the Secretary of Labor would have found and included in wage determinations prior to the 1964 amendments. The Secretary of Labor is required to continue to make a separate finding of this portion of the wage. In general, this portion of the wage is the cash payment made directly to the laborer or mechanic. It does not include fringe benefits.

§ 5.25 Rate of contribution or cost for fringe benefits.

- (a) Under the amendments, the Secretary is obligated to make a separate finding of the rate of contribution or cost of fringe benefits. Only the amount of contributions or costs for fringe benefits which meet the requirements of the act will be considered by the Secretary. These requirements are discussed in this subpart.
- (b) The rate of contribution or cost is ordinarily an hourly rate, and will be reflected in the wage determination as such. In some cases, however, the contribution or cost for certain fringe benefits may be expressed in a formula or method of payment other than an hourly rate. In such cases, the Secretary may in his discretion express in the wage determination the rate of contribution or cost used in the formula or method or may convert it to an hourly rate of pay whenever he finds that such action would facilitate the administration of the Act. See § 5.5(a)(1)(i) and (iii).
- (c) Except as provided in this section, contractors must “annualize” all contributions to fringe benefit plans (or the reasonably anticipated costs of an unfunded benefit plan) to determine the hourly equivalent for which they may take credit against their fringe benefit obligation. The “annualization” principle reflects that DBRA credit for contributions made to bona fide fringe benefit plans (or the reasonably anticipated costs of an unfunded benefit plan) is allowed based on the effective rate of contributions or costs incurred for total hours worked during the year (or a shorter time period) by a laborer or mechanic.
 - (1) **Method of computation.** To annualize the cost of providing a fringe benefit, a contractor must divide the total cost of the fringe benefit contribution (or the reasonably anticipated costs of an unfunded benefit plan) by the total number of hours worked on both private (non-DBRA) work and work covered by the Davis-Bacon Act and/or Davis-Bacon Related Acts (DBRA-covered work) during the time period to which the cost is attributable to determine the rate of contribution per hour. If the amount of contribution varies per worker, credit must be determined separately for the amount contributed on behalf of each worker.

- (2) **Exception requests.** Contractors, plans, and other interested parties may request an exception from the annualization requirement by submitting a request to the WHD Administrator. A request for an exception may be granted only if each of the requirements of paragraph (c)(3) of this section is satisfied. Contributions to defined contribution pension plans (DCPPs) are excepted from the annualization requirement, and exception requests therefore are not required in connection with DCPPs, provided that each of the requirements of paragraph (c)(3) is satisfied and the DCPP provides for immediate participation and essentially immediate vesting (*i.e.*, the benefit vests within the first 500 hours worked). Requests must be submitted in writing to the Division of Government Contracts Enforcement by email to DBAannualization@dol.gov or by mail to Director, Division of Government Contracts Enforcement, Wage and Hour Division, U.S. Department of Labor, 200 Constitution Ave. NW, Room S-3502, Washington, DC 20210.
- (3) **Exception requirements.** Contributions to a bona fide fringe benefit plan (or the reasonably anticipated costs of an unfunded benefit plan) are excepted from the annualization requirement if all of the following criteria are satisfied:
- (i) The benefit provided is not continuous in nature. A benefit is not continuous in nature when it is not available to a participant without penalty throughout the year or other time period to which the cost of the benefit is attributable; and
 - (ii) The benefit does not compensate both private work and DBRA-covered work. A benefit does not compensate both private and DBRA-covered work if any benefits attributable to periods of private work are wholly paid for by compensation for private work.

[29 FR 13465, Sept. 30, 1964, as amended at 88 FR 57744, Aug. 23, 2023]

§ 5.26 “* * * contribution irrevocably made * * * to a trustee or to a third person”.

- (a) **Requirements.** The following requirements apply to any fringe benefit contributions made to a trustee or to a third person pursuant to a fund, plan, or program:
- (1) Such contributions must be made irrevocably;
 - (2) The trustee or third person may not be affiliated with the contractor or subcontractor;
 - (3) A trustee must adhere to any fiduciary responsibilities applicable under law; and
 - (4) The trust or fund must not permit the contractor or subcontractor to recapture any of the contributions paid in or any way divert the funds to its own use or benefit.
- (b) **Excess payments.** Notwithstanding the above, a contractor or subcontractor may recover sums which it had paid to a trustee or third person in excess of the contributions actually called for by the plan, such as excess payments made in error or in order to cover the estimated cost of contributions at a time when the exact amount of the necessary contributions is not yet known. For example, a benefit plan may provide for definite insurance benefits for employees in the event of contingencies such as death, sickness, or accident, with the cost of such definite benefits borne by the contractor or subcontractor. In such a case, if the insurance company returns the amount that the contractor or subcontractor paid in excess of the amount required to provide the benefits, this will not be deemed a recapture or diversion by the employer of contributions made pursuant to the plan. (See Report of the Senate Committee on Labor and Public Welfare, S. Rep. No. 963, 88th Cong., 2d Sess., p. 5.)

[88 FR 57744, Aug. 23, 2023]

§ 5.27 “* * * fund, plan, or program”.

The contributions for fringe benefits must be made pursuant to a fund, plan or program (sec. 1(b)(2)(A) of the act). The phrase “fund, plan, or program” is merely intended to recognize the various types of arrangements commonly used to provide fringe benefits through employer contributions. The phrase is identical with language contained in section 3(1) of the Welfare and Pension Plans Disclosure Act. In interpreting this phrase, the Secretary will be guided by the experience of the Department in administering the latter statute. (See Report of Senate Committee on Labor and Public Welfare, S. Rep. No. 963, 88th Cong., 2d Sess., p. 5.)

§ 5.28 Unfunded plans.

- (a) The costs to a contractor or subcontractor which may be reasonably anticipated in providing benefits of the types described in the Act, pursuant to an enforceable commitment to carry out a financially responsible plan or program, are considered fringe benefits within the meaning of the Act (see 40 U.S.C. 3141(2)(B)(ii)). The legislative history suggests that these provisions were intended to permit the consideration of fringe benefits meeting these requirements, among others, and which are provided from the general assets of a contractor or subcontractor. (Report of the House Committee on Education and Labor, H. Rep. No. 308, 88th Cong., 1st Sess., p. 4; see also S. Rep. No. 963, p. 6.)
- (b) Such a benefit plan or program, commonly referred to as an unfunded plan, may not constitute a fringe benefit within the meaning of the Act unless:
 - (1) It could be reasonably anticipated to provide the benefits described in the Act;
 - (2) It represents a commitment that can be legally enforced;
 - (3) It is carried out under a financially responsible plan or program;
 - (4) The plan or program providing the benefits has been communicated in writing to the laborers and mechanics affected; and
 - (5) The contractor or subcontractor requests and receives approval of the plan or program from the Secretary, as described in paragraph (c) of this section.
- (c) To receive approval of an unfunded plan or program, a contractor or subcontractor must demonstrate in its request to the Secretary that the unfunded plan or program, and the benefits provided under such plan or program, are “bona fide,” meet the requirements set forth in paragraphs (b)(1) through (4) of this section, and are otherwise consistent with the Act. The request must include sufficient documentation to enable the Secretary to evaluate these criteria. Contractors and subcontractors may request approval of an unfunded plan or program by submitting a written request in one of the following manners:
 - (1) By mail to the United States Department of Labor, Wage and Hour Division, Director, Division of Government Contracts Enforcement, 200 Constitution Ave. NW, Room S-3502, Washington, DC 20210;
 - (2) By email to unfunded@dol.gov (or its successor email address); or
 - (3) By any other means directed by the Administrator.
- (d) Unfunded plans or programs may not be used as a means of avoiding the Act's requirements. The words “reasonably anticipated” require that any unfunded plan or program be able to withstand a test of actuarial soundness. Moreover, as in the case of other fringe benefits payable under the Act, an unfunded plan or program must be “bona fide” and not a mere simulation or sham for avoiding compliance with the Act. To prevent these provisions from being used to avoid compliance with the Act, the Secretary may

direct a contractor or subcontractor to set aside in an account assets which, under sound actuarial principles, will be sufficient to meet future obligations under the plan. Such an account must be preserved for the purpose intended. (S. Rep. No. 963, p. 6.)

[88 FR 57744, Aug. 23, 2023]

§ 5.29 Specific fringe benefits.

- (a) The act lists all types of fringe benefits which the Congress considered to be common in the construction industry as a whole. These include the following: Medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, vacation and holiday pay, defrayment of costs of apprenticeship or other similar programs, or other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other Federal, State, or local law to provide any of such benefits.
- (b) The legislative history indicates that it was not the intent of the Congress to impose specific standards relating to administration of fringe benefits. It was assumed that the majority of fringe benefits arrangements of this nature will be those which are administered in accordance with requirements of section 302(c)(5) of the National Labor Relations Act, as amended (S. Rep. No. 963, p. 5).
- (c) The term "other bona fide fringe benefits" is the so-called "open end" provision. This was included so that new fringe benefits may be recognized by the Secretary as they become prevailing. It was pointed out that a particular fringe benefit need not be recognized beyond a particular area in order for the Secretary to find that it is prevailing in that area. (S. Rep. No. 963, p. 6).
- (d) The legislative reports indicate that, to insure against considering and giving credit to any and all fringe benefits, some of which might be illusory or not genuine, the qualification was included that such fringe benefits must be "bona fide" (H. Rep. No. 308, p. 4; S. Rep. No. 963, p. 6). No difficulty is anticipated in determining whether a particular fringe benefit is "bona fide" in the ordinary case where the benefits are those common in the construction industry and which are established under a usual fund, plan, or program. This would be typically the case of those fringe benefits listed in paragraph (a) of this section which are funded under a trust or insurance program. Contractors may take credit for contributions made under such conventional plans without requesting the approval of the Secretary of Labor under § 5.5(a)(1)(iv).
- (e) Where the plan is not of the conventional type described in paragraph (d) of this section, the Secretary must examine the facts and circumstances to determine whether fringe benefits under the plan are "bona fide" in accordance with requirements of the Act. This is particularly true with respect to unfunded plans discussed in § 5.28. Contractors or subcontractors seeking credit under the Act for costs incurred for such plans must request specific approval from the Secretary under § 5.5(a)(1)(iv).
- (f) The act excludes fringe benefits which a contractor or subcontractor is obligated to provide under other Federal, State, or local law. No credit may be taken under the act for the payments made for such benefits. For example, payment for workmen's compensation insurance under either a compulsory or elective State statute are not considered payments for fringe benefits under the Act. While each situation must be separately considered on its own merits, payments made for travel, subsistence or to industry promotion funds are not normally payments for fringe benefits under the Act. The omission in the Act of any express reference to these payments, which are common in the construction industry, suggests that these payments should not normally be regarded as bona fide fringe benefits under the Act.

- (g) For a contractor or subcontractor to take credit for the costs of an apprenticeship program, the following requirements must be met:
- (1) The program, in addition to meeting all other relevant requirements for fringe benefits in this subpart, must be registered with the Department of Labor's Employment and Training Administration, Office of Apprenticeship ("OA"), or with a State Apprenticeship Agency recognized by the OA.
 - (2) The contractor or subcontractor may only take credit for amounts reasonably related to the costs of the apprenticeship benefits actually provided to the contractor's employees, such as instruction, books, and tools or materials. It may not take credit for voluntary contributions beyond such costs. Amounts the employer is required to contribute by a collective bargaining agreement or by a bona fide apprenticeship plan will be presumed to be reasonably related to such costs in the absence of evidence to the contrary.
 - (3) Costs incurred for the apprenticeship for one classification of laborer or mechanic may not be used to offset costs incurred for another classification.
 - (4) In applying the annualization principle to compute the allowable fringe benefit credit pursuant to § 5.25, the total number of working hours of employees to which the cost of an apprenticeship program is attributable is limited to the total number of hours worked by laborers and mechanics in the apprentice's classification. For example, if a contractor enrolls an employee in an apprenticeship program for carpenters, the permissible hourly Davis-Bacon credit is determined by dividing the cost of the program by the total number of hours worked by the contractor's carpenters and carpenters' apprentices on covered and non-covered projects during the time period to which the cost is attributable, and such credit may only be applied against the contractor's prevailing wage obligations for all carpenters and carpenters' apprentices for each hour worked on the covered project.

[29 FR 13465, Sept. 30, 1964, as amended at 88 FR 57745, Aug. 23, 2023]

§ 5.30 Types of wage determinations.

- (a) When fringe benefits are prevailing for various classes of laborers and mechanics in the area of proposed construction, such benefits are includable in any Davis-Bacon wage determination. The examples contained in paragraph (c) of this section demonstrate how fringe benefits may be listed on wage determinations in such cases.
- (b) Wage determinations do not include fringe benefits for various classes of laborers and mechanics whenever such benefits do not prevail in the area of proposed construction. When this occurs, the wage determination will contain only the basic hourly rates of pay which are prevailing for the various classes of laborers and mechanics. An illustration of this situation is contained in paragraph (c) of this section.
- (c) The following illustrates examples of the situations discussed in paragraph (a) and (b) of this section:

Figure 1 to Paragraph (c)

CLASSIFICATION	RATE	FRINGES
Bricklayer	\$21.96	\$0.00
Electrician	\$47.65	3%+\$14.88
Elevator mechanic	\$48.60	\$35.825+a+b a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day and the Friday after Thanksgiving. b. VACATIONS: Employer contributes 8% of basic hourly rate for 5 years or more of service; 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.
Ironworker, structural	\$32.00	\$12.01
Laborer: common or general	\$21.93	\$6.27
Operator: bulldozer	\$18.11	\$0.00
Plumber (excludes HVAC duct, pipe and unit installation)	\$38.38	\$16.67

Note 1 to paragraph (c): This format is not necessarily in the exact form in which determinations will issue; it is for illustration only.

[88 FR 57745, Aug. 23, 2023]

§ 5.31 Meeting wage determination obligations.

- (a) A contractor or subcontractor performing work subject to a Davis-Bacon wage determination may discharge their minimum wage obligations for the payment of both straight time wages and fringe benefits by paying in cash, making payments or incurring costs for “bona fide” fringe benefits of the types listed in the applicable wage determination or otherwise found prevailing by the Secretary of Labor, or by a combination thereof.
- (b) A contractor or subcontractor may discharge their obligations for the payment of the basic hourly rates and the fringe benefits where both are contained in a wage determination applicable to their laborers or mechanics in the following ways:
 - (1) By paying not less than the basic hourly rate to the laborers or mechanics and by making contributions for “bona fide” fringe benefits in a total amount not less than the total of the fringe benefits required by the wage determination. For example, the obligations for “Laborer: common or general” in § 5.30, figure 1 to paragraph (c), will be met by the payment of a straight time hourly rate of not less than \$21.93 and by contributions of not less than a total of \$6.27 an hour for “bona fide” fringe benefits; or
 - (2) By paying in cash directly to laborers or mechanics for the basic hourly rate and by making an additional cash payment in lieu of the required benefits. For example, where an employer does not make payments or incur costs for fringe benefits, they would meet their obligations for “Laborer: common or general” in § 5.30, figure 1 to paragraph (c), by paying directly to the laborers a straight time hourly rate of not less than \$28.60 (\$21.93 basic hourly rate plus \$6.27 for fringe benefits); or
 - (3) As stated in paragraph (a) of this section, the contractor or subcontractor may discharge their minimum wage obligations for the payment of straight time wages and fringe benefits by a combination of the methods illustrated in paragraphs (b)(1) and (2) of this section. Thus, for example, their obligations for “Laborer: common or general” may be met by an hourly rate, partly in cash and partly in payments or costs for fringe benefits which total not less than \$28.60 (\$21.93 basic hourly rate plus \$6.27 for fringe benefits).

[88 FR 57746, Aug. 23, 2023]

§ 5.32 Overtime payments.

- (a) The act excludes amounts paid by a contractor or subcontractor for fringe benefits in the computation of overtime under the Fair Labor Standards Act, the Contract Work Hours and Safety Standards Act, and the Walsh-Healey Public Contracts Act whenever the overtime provisions of any of these statutes apply concurrently with the Davis-Bacon Act or its related prevailing wage statutes. It is clear from the legislative history that in no event can the regular or basic rate upon which premium pay for overtime is calculated under the aforementioned Federal statutes be less than the amount determined by the Secretary of Labor as the basic hourly rate (i.e. cash rate) under section 1(b)(1) of the Davis-Bacon Act. (See S. Rep. No. 963, p. 7.) Contributions by employees are not excluded from the regular or basic rate upon which overtime is computed under these statutes; that is, an employee's regular or basic straight-time rate is computed on his earnings before any deductions are made for the employee's contributions

to fringe benefits. The contractor's contributions or costs for fringe benefits may be excluded in computing such rate so long as the exclusions do not reduce the regular or basic rate below the basic hourly rate contained in the wage determination.

- (b) The legislative report notes that the phrase "contributions irrevocably made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program" was added to the bill in Committee. This language in essence conforms to the overtime provisions of section 7(d)(4) of the Fair Labor Standards Act, as amended. The intent of the committee was to prevent any avoidance of overtime requirements under existing law. See H. Rep. No. 308, p. 5.

(c)

- (1) The act permits a contractor or subcontractor to pay a cash equivalent of any fringe benefits found prevailing by the Secretary of Labor. Such a cash equivalent would also be excludable in computing the regular or basic rate under the Federal overtime laws mentioned in paragraph (a). For example, the W construction contractor pays his laborers or mechanics \$3.50 in cash under a wage determination of the Secretary of Labor which requires a basic hourly rate of \$3 and a fringe benefit contribution of 50 cents. The contractor pays the 50 cents in cash because he made no payments and incurred no costs for fringe benefits. Overtime compensation in this case would be computed on a regular or basic rate of \$3.00 an hour. However, in some cases a question of fact may be presented in ascertaining whether or not a cash payment made to laborers or mechanics is actually in lieu of a fringe benefit or is simply part of their straight time cash wage. In the latter situation, the cash payment is not excludable in computing overtime compensation. Consider the examples set forth in paragraphs (c)(2) and (3) of this section.
- (2) The X construction contractor has for some time been paying \$3.25 an hour to a mechanic as his basic cash wage plus 50 cents an hour as a contribution to a welfare and pension plan. The Secretary of Labor determines that a basic hourly rate of \$3 an hour and a fringe benefit contribution of 50 cents are prevailing. The basic hourly rate or regular rate for overtime purposes would be \$3.25, the rate actually paid as a basic cash wage for the employee of X, rather than the \$3 rate determined as prevailing by the Secretary of Labor.
- (3) Under the same prevailing wage determination, discussed in paragraph (c)(2) of this section, the Y construction contractor who has been paying \$3 an hour as his basic cash wage on which he has been computing overtime compensation reduces the cash wage to \$2.75 an hour but computes his costs of benefits under section 1(b)(2)(B) as \$1 an hour. In this example the regular or basic hourly rate would continue to be \$3 an hour. See S. Rep. No. 963, p. 7.

§ 5.33 Administrative expenses of a contractor or subcontractor.

- (a) **Creditable costs.** The costs incurred by a contractor's insurance carrier, third-party trust fund, or other third-party administrator that are directly related to the administration and delivery of bona fide fringe benefits to the contractor's laborers and mechanics can be credited towards the contractor's obligations under a Davis-Bacon wage determination. Thus, for example, a contractor may take credit for the premiums it pays to an insurance carrier or the contributions it makes to a third-party trust fund that both administers and delivers bona fide fringe benefits under a plan, where the insurance carrier or third-party trust fund uses those monies to pay for bona fide fringe benefits and for the administration and delivery of such benefits, including evaluating benefit claims, deciding whether they should be paid, approving referrals to specialists, and other reasonable costs of administering the plan. Similarly, a contractor may also take credit for monies paid to a third-party administrator to perform tasks that are directly related to the administration and delivery of bona fide fringe benefits, including under an unfunded plan.

- (b) **Noncreditable costs.** A contractor's own administrative expenses incurred in connection with the provision of fringe benefits are considered business expenses of the firm and are therefore not creditable towards the contractor's prevailing wage obligations, including when the contractor pays a third party to perform such tasks in whole or in part. For example, a contractor may not take credit for the costs of office employees who perform tasks such as filling out medical insurance claim forms for submission to an insurance carrier, paying and tracking invoices from insurance carriers or plan administrators, updating the contractor's personnel records when workers are hired or separate from employment, sending lists of new hires and separations to insurance carriers or plan administrators, or sending out tax documents to the contractor's workers, nor can the contractor take credit for the cost of paying a third-party entity to perform these tasks. Additionally, recordkeeping costs associated with ensuring the contractor's compliance with the Davis-Bacon fringe benefit requirements, such as the cost of tracking the amount of a contractor's fringe benefit contributions or making sure contributions cover the fringe benefit amount claimed, are considered a contractor's own administrative expenses and are not considered directly related to the administration and delivery of bona fide fringe benefits. Thus, such costs are not creditable whether the contractor performs those tasks itself or whether it pays a third party a fee to perform those tasks.
- (c) **Questions regarding administrative expenses.** Any questions regarding whether a particular cost or expense is creditable towards a contractor's prevailing wage obligations should be referred to the Administrator for resolution prior to any such credit being claimed.

[88 FR 57747, Aug. 23, 2023]
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Subpart C—Severability

Source: 88 FR 57747, Aug. 23, 2023, unless otherwise noted.
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§ 5.40 Severability.

The provisions of this part are separate and severable and operate independently from one another. If any provision of this part is held to be invalid or unenforceable by its terms, or as applied to any person or circumstance, or stayed pending further agency action, the provision is to be construed so as to continue to give the maximum effect to the provision permitted by law, unless such holding is one of utter invalidity or unenforceability, in which event the provision is severable from this part and will not affect the remaining provisions.

XIII. EQUAL EMPLOYMENT OPPORTUNITY – 41 C.F.R. §§ 60-1.4 and 60-4.3; 2 C.F.R. § 200, Appx. II(C), and Executive Order 11246

Applicability: The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds \$10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount or the contract.

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 § 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 shall 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 therefore along with whatever additional actions the contractor may have taken.
- d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or 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 workforce.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually

monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

- n. Ensure that all facilities and company activities are nonsegregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
- p. Conduct a review, at least annually, of all 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 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, 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 number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

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

See [Attachment 5](#).

XIV. Prohibition of Segregated Facilities – 2 CFR Part 200, Appendix II(C), 41 CFR Part 60-1

1. 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 provision is a violation of the Equal Opportunity provision in this Contract.

2. "Segregated facilities," as used in this provision, 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.

3. The Contractor shall include this provision in every subcontract and purchase order that is subject to the Equal Opportunity provision of this Contract.

[See Attachment 6.](#)

XV. Notice of Requirement for Affirmative Action – 41 C.F.R. § 60-4 and Executive Order 11246

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: No goal has been established.

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 non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 C.F.R. 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 C.F.R. 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 C.F.R. 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 Arizona, Maricopa County, and City of Phoenix.

XVI. Tax Delinquency and Felony Convictions - Section 8113 of the Consolidated Appropriations Act, 2022 (Public Law 117-103) and similar provisions in subsequent appropriations acts; DOT Order 4200.6

The sponsor must ensure that no funding goes to any contractor who:

- Has been convicted of a Federal felony within the last 24 months; or
- Has any outstanding tax liability for which all judicial and administrative remedies have lapsed or been exhausted.

[See Attachment 7.](#)

XVII. Termination of Contract – 2 C.F.R. Part 200, Appendix II(B) and FAA Circular 150/5370-10, § 80-09

TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)

The City 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 the City. Upon receipt of a written notice of termination, except as explicitly directed by the City, 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.

TERMINATION FOR CAUSE (EQUIPMENT)

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

1. Fails to begin the Work under the Contract within the time specified in the Notice-to-Proceed;

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

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

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

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

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

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

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

XVIII. Debarment and Suspension – 2 C.F.R. Parts 180 (Subpart B), 200 Appendix II(H), and 1200; U.S. DOT Order 4200.5; and Executive Orders 12549 and 12689

Certification of Bidder or Offeror Regarding Debarment

By submitting a bid or 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 verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally-assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: <http://www.sam.gov>.
2. Collecting a certification statement similar to the 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.

See [Attachment 8](#).

XIX. Contract Workhours and Safety Standards Act Requirements – 2 C.F.R. Part200, Appendix II(E), 2 CFR § 5.5(b), 40 USC § 3702, 3704

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 or the City 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.

XX. Clean Air and Water Pollution Control – 2 C.F.R. § 200, Appendix II(G), 42 USC § 7401 et seq. 33 USC §1251 et seq

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the City immediately upon discovery. The City assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

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

XXI. Distracted Driving and Texting While Driving – Executive Order 13513 and DOT Order 3902.10

In accordance with Executive Order 13513, “Federal Leadership on Reducing Text Messaging While Driving” (October 1, 2009), and DOT Order 3902.10, “Text Messaging While Driving” (December 30, 2009), the FAA encourages the City and Contractor, as recipients of federal funds, to adopt and enforce safety policies that decrease crashes caused by distracted drivers, including policies to ban text messaging while driving when performing any work related to this Contract, a grant or a subgrant.

In support of this initiative, the City 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 this Contract. The Contractor must include the substance of this clause in all sub-tier contracts exceeding \$10,000 that involve driving a motor vehicle in the performance of work activities associated with this Contract.

XXII. Occupational Safety and Health Act of 1970 -- 29 C.F.R. Part 1910

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

XXIII. Copeland “Anti-kickback” Act – 2 CFR Part 200, Appendix II(D) and 29 CFR Parts 3 and 5

This provision applies to all construction contracts and subcontracts financed under the AIP that exceed \$2,000.

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 City a weekly statement on the wages paid to each employee performing on covered work during the prior week. The City must report any violations of the Act to the FAA.

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

Title 29 — Labor

Subtitle A — Office of the Secretary of Labor

Part 3 Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States

- § 3.1 Purpose and scope.
- § 3.2 Definitions.
- § 3.3 Certified payrolls.
- § 3.4 Submission of certified payroll and the preservation and inspection of weekly payroll records.
- § 3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.
- § 3.6 Payroll deductions permissible with the approval of the Secretary of Labor.
- § 3.7 Applications for the approval of the Secretary of Labor.
- § 3.8 Action by the Secretary of Labor upon applications.
- § 3.9 Prohibited payroll deductions.
- § 3.10 Methods of payment of wages.
- § 3.11 Regulations part of contract.

PART 3—CONTRACTORS AND SUBCONTRACTORS ON PUBLIC BUILDING OR PUBLIC WORK FINANCED IN WHOLE OR IN PART BY LOANS OR GRANTS FROM THE UNITED STATES

Authority: R.S. 161, sec. 2, 48 Stat. 848; Reorg. Plan No. 14 of 1950, 64 Stat. 1267; 5 U.S.C. 301; 40 U.S.C. 3145; Secretary's Order 01-2014 (Dec. 19, 2014), 79 FR 77527 (Dec. 24, 2014).

Source: 29 FR 97, Jan. 4, 1964, unless otherwise noted.

§ 3.1 Purpose and scope.

This part prescribes “anti-kickback” regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 3145), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage provisions of the Davis-Bacon Act and the various statutes dealing with federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No. 14 of 1950 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the

Contract Work Hours and Safety Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

[88 FR 57728, Aug. 23, 2023]

§ 3.2 Definitions.

As used in the regulations in this part:

Affiliated person. The term “affiliated person” includes a spouse, child, parent, or other close relative of the contractor or subcontractor; a partner or officer of the contractor or subcontractor; a corporation closely connected with the contractor or subcontractor as parent, subsidiary, or otherwise, and an officer or agent of such corporation.

Agency. The term “agency” means any Federal, State, or local government agency or instrumentality, or other similar entity, that enters into a contract or provides assistance through loan, grant, loan guarantee or insurance, or otherwise, for a project subject to the Davis-Bacon labor standards, as defined in § 5.2 of this subtitle.

(1) **Federal agency.** The term “Federal agency” means an agency or instrumentality of the United States or the District of Columbia, as defined in this section, that enters into a contract or provides assistance through loan, grant, loan guarantee or insurance, or otherwise, to a project subject to the Davis-Bacon labor standards.

(2) [Reserved]

Building or work. The term “building or work” generally includes construction activity of all types, as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The term includes, without limitation, buildings, structures, and improvements of all types, such as bridges, dams, solar panels, wind turbines, broadband installation, installation of electric car chargers, plants, highways, parkways, streets, subways, tunnels, sewers, mains, powerlines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, rehabilitation and reactivation of plants, scaffolding, drilling, blasting, excavating, clearing, and landscaping. The term “building or work” also includes a portion of a building or work, or the installation (where appropriate) of equipment or components into a building or work.

(1) **Building or work financed in whole or in part by loans or grants from the United States.** The term “building or work financed in whole or in part by loans or grants from the United States” includes any building or work for which construction, prosecution, completion, or repair, as defined in this section, payment or part payment is made directly or indirectly from funds provided by loans or grants by a Federal agency. The term includes any building or work for which the Federal assistance granted is in the form of loan guarantees or insurance.

(2) [Reserved]

Construction, prosecution, completion, or repair. The term “construction, prosecution, completion, or repair” mean all types of work done on a particular building or work at the site thereof as specified in § 5.2 of this subtitle, including, without limitation, altering, remodeling, painting and decorating, installation on the site

of the work of items fabricated offsite, covered transportation as reflected in § 5.2, demolition and/or removal as reflected in § 5.2, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, performed by laborers and mechanics at the site.

Employed (and wages). Every person paid by a contractor or subcontractor in any manner for their labor in the construction, prosecution, completion, or repair of a public building or public work or building or work financed in whole or in part by assistance from the United States through loan, grant, loan guarantee or insurance, or otherwise, is “employed” and receiving “wages”, regardless of any contractual relationship alleged to exist between the contractor and such person.

Public building (or public work). The term “public building (or public work)” includes a building or work the construction, prosecution, completion, or repair of which, as defined in this section, is carried on directly by authority of or with funds of a Federal agency to serve the general public regardless of whether title thereof is in a Federal agency. The construction, prosecution, completion, or repair of a portion of a building or work, or the installation (where appropriate) of equipment or components into a building or work, may still be considered a public building or work, even where the entire building or work is not owned, leased by, or to be used by the Federal agency, as long as the construction, prosecution, completion, or repair of that portion of the building or work, or the installation (where appropriate) of equipment or components into that building or work, is carried on by authority of or with funds of a Federal agency to serve the interest of the general public.

United States or the District of Columbia. The term “United States or the District of Columbia” means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentalities of the United States and of the District of Columbia, and any corporation for which all or substantially all of the stock of which is beneficially owned by the United States, by the District of Columbia, or any of the foregoing departments, establishments, agencies, and instrumentalities.

[88 FR 57729, Aug. 23, 2023]

§ 3.3 Certified payrolls.

- (a) [Reserved]
- (b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, each week must provide a copy of its weekly payroll for all laborers and mechanics engaged on work covered by this part and part 5 of this chapter during the preceding weekly payroll period, accompanied by a statement of compliance certifying the accuracy of the weekly payroll information. This statement must be executed by the contractor or subcontractor or by an authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, and must be on the back of Form WH-347, “Payroll (For Contractors Optional Use)” or on any form with identical wording. Copies of WH-347 may be obtained from the contracting or sponsoring agency or from the Wage and Hour Division website at <https://www.dol.gov/agencies/whd/government-contracts/construction/forms> or its successor site. The signature by the contractor, subcontractor, or the authorized officer or employee must be an original handwritten signature or a legally valid electronic signature.
- (c) The requirements of this section do not apply to any contract of \$2,000 or less.

- (d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances, and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify.

[88 FR 57729, Aug. 23, 2023]

§ 3.4 Submission of certified payroll and the preservation and inspection of weekly payroll records.

- (a) **Certified payroll.** Each certified payroll required under § 3.3 must be delivered by the contractor or subcontractor, within 7 days after the regular payment date of the payroll period, to a representative at the site of the building or work of the agency contracting for or financing the work, or, if there is no representative of the agency at the site of the building or work, the statement must be delivered by mail or by any other means normally assuring delivery by the contractor or subcontractor, within that 7 day time period, to the agency contracting for or financing the building or work. After the certified payrolls have been reviewed in accordance with the contracting or sponsoring agency's procedures, such certified payrolls must be preserved by the agency for a period of 3 years after all the work on the prime contract is completed and must be produced for inspection, copying, and transcription by the Department of Labor upon request. The certified payrolls must also be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.
- (b) **Recordkeeping.** Each contractor or subcontractor must preserve the regular payroll records for a period of 3 years after all the work on the prime contract is completed. The regular payroll records must set out accurately and completely the name; Social Security number; last known address, telephone number, and email address of each laborer and mechanic; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid. The contractor or subcontractor must make such regular payroll records, as well as copies of the certified payrolls provided to the contracting or sponsoring agency, available at all times for inspection, copying, and transcription by the contracting officer or their authorized representative, and by authorized representatives of the Department of Labor.

[88 FR 57730, Aug. 23, 2023]

§ 3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor:

- (a) Any deduction made in compliance with the requirements of Federal, State, or local law, such as Federal or State withholding income taxes and Federal social security taxes.
- (b) Any deduction of sums previously paid to the laborer or mechanic as a bona fide prepayment of wages when such prepayment is made without discount or interest. A bona fide prepayment of wages is considered to have been made only when cash or its equivalent has been advanced to the person employed in such manner as to give him complete freedom of disposition of the advanced funds.

- (c) Any deduction of amounts required by court process to be paid to another, unless the deduction is in favor of the contractor, subcontractor, or any affiliated person, or when collusion or collaboration exists.
- (d) Any deduction constituting a contribution on behalf of the laborer or mechanic employed to funds established by the contractor or representatives of the laborers or mechanics, or both, for the purpose of providing either from principal or income, or both, medical or hospital care, pensions or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness, or disability, or for insurance to provide any of the foregoing, or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of the laborers or mechanics, their families and dependents: *Provided, however,* That the following standards are met:
 - (1) The deduction is not otherwise prohibited by law;
 - (2) It is either:
 - (i) Voluntarily consented to by the laborer or mechanic in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of or for the continuation of employment; or
 - (ii) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its laborers or mechanics;
 - (3) No profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and
 - (4) The deductions must serve the convenience and interest of the laborer or mechanic.
- (e) Any deduction requested by the laborer or mechanic to enable him or her to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.
- (f) Any deduction voluntarily authorized by the laborer or mechanic for the making of contributions to governmental or quasi-governmental agencies, such as the American Red Cross.
- (g) Any deduction voluntarily authorized by the laborer or mechanic for the making of contributions to charitable organizations as defined by 26 U.S.C. 501(c)(3).
- (h) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: *Provided, however,* That a collective bargaining agreement between the contractor or subcontractor and representatives of its laborers or mechanics provides for such deductions and the deductions are not otherwise prohibited by law.
- (i) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and 29 CFR part 531. When such a deduction is made the additional records required under 29 CFR 516.25(a) must be kept.
- (j) Any deduction for the cost of safety equipment of nominal value purchased by the laborer or mechanic as their own property for their personal protection in their work, such as safety shoes, safety glasses, safety gloves, and hard hats, if such equipment is not required by law to be furnished by the contractor, if such deduction does not violate the Fair Labor Standards Act or any other law, if the cost on which the deduction is based does not exceed the actual cost to the contractor where the equipment is purchased from the contractor and does not include any direct or indirect monetary return to the contractor where the equipment is purchased from a third person, and if the deduction is either:

- (1) Voluntarily consented to by the laborer or mechanic in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance; or
- (2) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its laborers and mechanics.

[88 FR 57730, Aug. 23, 2023]

§ 3.6 Payroll deductions permissible with the approval of the Secretary of Labor.

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any deduction not permitted under § 3.5. The Secretary may grant permission whenever he finds that:

- (a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit directly or indirectly from the deduction either in the form of a commission, dividend, or otherwise;
- (b) The deduction is not otherwise prohibited by law;
- (c) The deduction is either
 - (1) voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance, or
 - (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and
- (d) The deduction serves the convenience and interest of the employee.

§ 3.7 Applications for the approval of the Secretary of Labor.

Any application for the making of payroll deductions under § 3.6 must comply with the requirements prescribed in the following paragraphs of this section:

- (a) The application must be in writing and addressed to the Secretary of Labor. The application must be submitted by email to dbadeductions@dol.gov, by mail to the United States Department of Labor, Wage and Hour Division, Director, Division of Government Contracts Enforcement, 200 Constitution Ave., NW, Room S-3502, Washington, DC 20210, or by any other means normally assuring delivery.
- (b) The application need not identify the contract or contracts under which the work in question is to be performed. Permission will be given for deductions on all current and future contracts of the applicant for a period of 1 year. A renewal of permission to make such payroll deduction will be granted upon the submission of an application which makes reference to the original application, recites the date of the Secretary of Labor's approval of such deductions, states affirmatively that there is continued compliance with the standards set forth in the provisions of § 3.6, and specifies any conditions which have changed in regard to the payroll deductions.
- (c) The application must state affirmatively that there is compliance with the standards set forth in the provisions of § 3.6. The affirmation must be accompanied by a full statement of the facts indicating such compliance.

- (d) The application must include a description of the proposed deduction, the purpose of the deduction, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.
- (e) The application must state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant.

[88 FR 57731, Aug. 23, 2023]

§ 3.8 Action by the Secretary of Labor upon applications.

The Secretary of Labor will decide whether or not the requested deduction is permissible under provisions of § 3.6; and will notify the applicant in writing of the decision.

[88 FR 57731, Aug. 23, 2023]

§ 3.9 Prohibited payroll deductions.

Deductions not elsewhere provided for by this part and which are not found to be permissible under § 3.6 are prohibited.

§ 3.10 Methods of payment of wages.

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

§ 3.11 Regulations part of contract.

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part must expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see § 5.5(a) of this subtitle. However, these requirements will be considered to be effective by operation of law, whether or not they are incorporated into such contracts, as set forth in § 5.5(e) of this subtitle.

[88 FR 57731, Aug. 23, 2023]

XXIV. Federal Fair Labor Standards Act (Federal Minimum Wage) – 29 U.S.C. §§ 201, et seq., 2 CFR § 200.430

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.

XXV. Procurement of Recovered Materials — 2 CFR § 200.323, 2 CFR Part 200, Appendix II(J) 40 CFR Part 247 and 42 USC § 6901, et seq (Resource Conservation and Recovery Act (RCRA))

This provision must be included in all construction and equipment projects.

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.

XXVI. Seismic Safety – 49 C.F.R. Part 41

The Contractor agrees to ensure that all work performed under this contract, including work performed by subcontractors, conforms to a building code standard that provides a level of seismic safety substantially equivalent to standards established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety.

XXVII. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment - 2 CFR § 200, Appendix II(K), 2 CFR § 200.216

The City and subgrant recipients are prohibited from using AIP grant funds to:

- a. Procure or obtain,
- b. Extend or renew a contract to procure or obtain, or
- c. Enter into a contract to procure or obtain certain covered telecommunications equipment.

These restrictions apply to telecommunication equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system or as critical technology as part of any system. Covered telecommunications equipment is equipment produced or provided by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of either).

See [Attachment 9](#) for Certification which must be included in all AIP funded contracts and lower-tier contracts.

XXVIII. Certification Regarding Domestic Preferences for Procurements - 2 CFR § 200.322, 2 CFR Part 200, Appendix II(L)

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.

ATTACHMENT 1 - BUY AMERICAN CERTIFICATION

Certification of Compliance with FAA Buy American Preference – Construction Projects

(Involves the replacement, rehabilitation, reconstruction of airfield surfaces such as on runways, taxiways, taxilanes, aprons, roadways, parking lots, etc.)

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 U.S.C. § 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 U.S.C. § 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; or
 - 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 City 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) To 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% Buy American Preferences of 49 U.S.C. § 50101(a) but may qualify for either a

Type 3 or Type 4 waiver under 49 U.S.C. § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

- a) To submit to the City 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.⁴
- 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% 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% 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%. The required documentation for a Type 4 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 U.S.C. § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation AdministrationA 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

(Involves and includes the acquisition of equipment such as snow removal equipment, navigational aids, wind cones, and the construction of buildings such as hangars, terminal development, lighting vaults, aircraft rescue & firefighting buildings, etc.)

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 U.S.C. § 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 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 City 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% Buy American Preferences of 49 U.S.C. § 50101(a), but may qualify for a Type 3

waiver under 49 U.S.C. § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

- a) To submit to the City within 15 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that support 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 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) 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% 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% 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%. The required documentation for a Type 4 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 U.S.C. § 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

ATTACHMENT 2 – CERTIFICATION REGARDING LOBBYING

As a condition of responsiveness, this Certification must be submitted with each bid or offer exceeding \$100,000.

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 federally 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.

The Bidder or Offeror, _____, certifies the truthfulness and accuracy of each statement of this certification. In addition, the Bidder or Offeror understands and agrees that the provisions of 31 U.S.C. §§ 3801-3812,

Administrative Remedies for False Claims and Statements, apply to this certification.

Signature of Bidder's/Offeror's Authorized Official

Name and Title of Bidder's/Offeror's Authorized Official

Bidder's/Offeror's Firm Name

Date

ATTACHMENT 3 - RIGHTS IN DATA AND RIGHTS IN INVENTIONS

Contractor by entering into this Contract with the City to perform services associated with or in requirement of the conditions stated in this Contract does, by affixing its authorized signature on the lines provided below, agrees to the following:

1. That no sole rights to data provided in the submission or in fulfillment of contract requirements exist within the domain of the Contractor.
2. That all data provided in the submission or in the documents provided in fulfillment of this Contract become the property of the City for its use and benefit.
3. That no data submitted in documents required for Contract fulfillment will be regarded by the City as proprietary to the Contractor.
4. "Intellectual Property Rights" or "IPR" means all intellectual property rights, including any rights in any invention, patent, discovery, improvement, know-how, utility model, trade-mark, copyright, industrial design, mask work, integrated circuit topography, and trade secret, and all rights of whatsoever nature in computer software and data, confidential information, and all intangible rights or privileges of any nature similar to any of the foregoing, including in every case in any part of the world and whether or not registered, and shall include all rights in any applications and granted registrations for any of the foregoing.
5. "Joint IPR" means the Intellectual Property Rights conceived, created, developed, or reduced to practice in a Project pursuant to this Contract.
6. Intellectual Property Ownership. The City shall own all right, title, and interest in any Intellectual Property conceived, developed, created, or reduced to practice pursuant to this Contract, and Contractor shall have no ownership interest therein. Contractor hereby irrevocably transfers, conveys, and assigns to the City all of its right, title, and interest therein and in any property owned or to be owned by the City under this Contract. Contractor shall execute such documents, render such assistance, and take such other action as the City may reasonably request, at the City's reasonable expense, to apply for, register, perfect, confirm, and protect City's Intellectual Property Rights and ownership interests. The City has the exclusive right to apply for or register any patents, mask work rights, copyrights, and such other proprietary protections with respect thereto.
7. All documents, including artwork, copy, posters, billboards, photographs, video tapes, audio tapes, systems designs, drawings, estimates, field notes, investigations, software, reports, diagrams, surveys, analysis, studies, or any other original works of authorship created by Contractor in the performance of this Contract are to be and remain "works for hire" under Title 17, United States Code, and the property of the City and all copyright ownership and authorship rights in the works shall belong to the City pursuant to 17 U.S.C. § 201(b). If the works that are the subject matter of this Contract are deemed to not be works for hire, then

Contractor hereby assigns to the City all of its right, title, and interest for the entire world in and to the works and the copyright therein. Contractor agrees to cooperate and execute additional documents reasonably necessary to conform with its obligations under this paragraph.

8. All Joint IPR will be the exclusive property of the City, and Contractor hereby assigns all its right, title, and interest in the same to the City. Any and all intellectual property conceived by the Contractor prior to the term of this Contract and utilized by it in rendering duties to the City are hereby licensed to the City for use in its operations and for an infinite duration. This license is non-exclusive and may be assigned without the Contractor's prior written approval by the City. Contractor agrees to provide all reasonable assistance requested by the City for the registration and protection of such intellectual property rights free of charge.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Bidder's/Contractor's Firm Name

Date

ATTACHMENT 4 – 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 as 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 18 U.S.C. § 1001.

The Offeror/Contractor must provide immediate written notice to the City 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 C.F.R. 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 as published by the USTR; or
- 2) whose subcontractors are owned or controlled by one or more citizens or national of a foreign country on the 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 the 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 is not a firm from a foreign country foreign country included on the list of countries that discriminate against U.S. firms as published by the 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 City cancellation of the Contract or subcontract for default at no cost to the City of the FAA.

Signature of Offeror's Authorized Official

Name and Title of Offeror's Authorized Official

Offeror's Firm Name

Date

ATTACHMENT 5 - CERTIFICATION ON PREVIOUS CONTRACTS SUBJECT TO EQUAL OPPORTUNITY CLAUSE

Each Contractor and proposed subcontractors must complete the following form by checking the appropriate blanks.

The Contractor or subcontractor has _____ has not _____ participated in a previous contract subject to the Equal Opportunity Clause prescribed by Executive Order 11246, as amended, of September 24, 1965.

The Contractor or subcontractor has _____ has not _____ submitted all compliance reports in connection with any such contract due under the applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed subcontractors will be obtained prior to award of subcontractors.

If the Contractor or subcontractor has participated in a previous contract subject to the Equal Opportunity Clause and has not submitted compliance reports due under applicable filing requirements, the Contractor shall submit a compliance report on Standard Form 100, "Employee Information Report EEP-1" prior to the award of this Contract.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Contractor's Firm Name

Contractor's Business Address

Date

ATTACHMENT 6 - CERTIFICATION OF NON-SEGREGATED FACILITIES

This Certification of Non-Segregated Facilities must be submitted prior to the award of a contract or subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

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

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

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.

The Federally assisted Contractor certifies that he does not maintain or provide, for his employees any segregated facilities at any of his establishment, and that he does not permit his employees to perform their services at any location, under his control where segregated facilities are maintained. The Federally assisted Construction Contractor certifies further that he will not maintain or provide for his employees segregated facilities at any of his establishments, and that will not permit his employees to perform their services at any location, under this 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 room, work areas, and washrooms, restaurants and other eating area, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, sex or national origin, because of habit, local custom, or any other reason. The Federally assisted Contractor agrees that (except where he has obtained identical certifications from proposed subcontractors for special time periods) he will

obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that he will retain such certifications in his files.

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

Name of Contractor or subcontractor: _____

Signature and Title: _____

Business Address: _____

ATTACHMENT 7 – 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 (☐) 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 City about its tax liability or conviction to the City, 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 twentyfour (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

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

Signature of Bidder's/Offeror's Authorized Official

Name and Title of Bidder's/Offeror's Authorized Official

Bidder's/Offeror's Firm Name

Date

ATTACHMENT 8 - CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS

A. The Bidder/Contractor certifies to the best of its knowledge and belief that the Bidder/Contractor and/or any of its Principals:

1. Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;
2. Have not within a three-year period preceding this bid, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws or receiving stolen property; and
3. Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (A) (2) of this provision.
4. Have not within a three-year period preceding this bid been notified of any delinquent Federal taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied.
5. Have not within a three-year period preceding this bid had one or more contracts terminated for default by any Federal agency.

B. For the purpose of this Certification, "Principals" means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions). THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE U.S. AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER S TITLE 18, U.S.C. SECTION 1001.

1. The Bidder/Contractor must provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Bidder/Contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
2. A certification that any of the items in paragraph (A) of this provision exists will not necessarily result in withholding of an award. However, the certification will be considered in connection with a determination of the Bidder's/Contractor's responsibility. Failure of the Bidder/Contractor to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Bidder/Contractor nonresponsible.

3. Nothing contained in the foregoing will be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (A) of this provision. The knowledge and information of a Bidder/Contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
4. The certification in paragraph (A) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Bidder/Contractor knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the Contract for default.

_____ Signature of Bidder's/Contractor's Authorized Official

_____ Name and Title of Bidder's/Contractor's Authorized
Official

_____ Bidder's/Contractor's Firm Name

_____ Date (FAA/Date)

**ATTACHMENT 9 – PROHIBITION ON CERTAIN
TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR
EQUIPMENT – 2 CFR § 200, Appendix II(K), 2 CFR § 200.216**

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)].

Signature of Contractor's/Subcontractor's Authorized Official

Name and Title of Contractor's/Subcontractor's Authorized Official

Contractor's/Subcontractor's Firm Name

Date

"General Decision Number: AZ20250045 08/29/2025

Superseded General Decision Number: AZ20240045

State: Arizona

Construction Type: Highway

County: Maricopa County in Arizona.

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: 	· Executive Order 14026 generally applies to the contract. · The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: 	· Executive Order 13658 generally applies to the contract. · The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours 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	06/06/2025
2	08/29/2025

CARP1912-003 07/01/2024

	Rates	Fringes
Carpenter, Excludes Formwork		
Concrete.....	\$ 35.89	14.98

 ENGI0012-046 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Bulldozer.....	\$ 35.56	18.12

 ENGI0012-053 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Tractor.....	\$ 35.56	18.12

 ENGI0012-063 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Oiler.....	\$ 32.29	18.12

 ENGI0012-065 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Field Equipment		
Serviceperson.....	\$ 35.56	18.12

 ENGI0012-066 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Backhoe/Backhoe & Loader		
Combo/Track Backhoe.....	\$ 35.56	18.12

ENGI0012-069 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Loader/Front End Loader.....	\$ 35.56	18.12

ENGI0012-070 12/01/2024

	Rates	Fringes
TRUCK DRIVER		
Off Road Truck.....	\$ 35.56	18.12

ENGI0012-071 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Crane/Derrick.....	\$ 36.64	18.12

ENGI0012-072 12/01/2024

	Rates	Fringes
Power Equipment Operator:		
Excavator/Trackhoe		
1/2 cubic yard or smaller...	\$ 35.56	18.12
Greater than 1/2 cubic yard.	\$ 36.64	18.12

ENGI0012-073 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Grade Checker.....	\$ 36.64	18.12

ENGI0012-074 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Motor Grader/Blade.....	\$ 36.64	18.12

ENGI0012-075 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Mechanic.....	\$ 37.67	18.12

* IRON0075-014 08/01/2025

	Rates	Fringes
Ironworker.....	\$ 33.00	19.91

LABO1184-016 06/01/2025

	Rates	Fringes
Power Equipment Operator: Horizontal Directional Drill.....	\$ 31.98	9.26

LABO1184-017 06/01/2025

	Rates	Fringes
Laborer: Fence Erector.....	\$ 27.41	9.26

LABO1184-021 06/01/2025

	Rates	Fringes
Traffic Control.....	\$ 27.41	9.26

LABO1184-025 06/01/2025

	Rates	Fringes
Laborer: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 29.91	9.26

LABO1184-027 06/01/2025

	Rates	Fringes
Laborer: Grade Setter.....	\$ 29.91	9.26

LABO1184-029 06/01/2025

	Rates	Fringes
LABORER: Guardrail Installer.....	\$ 29.91	9.26

LABO1184-033 06/01/2025

	Rates	Fringes
Power Equipment Operator: Trencher.....	\$ 30.88	9.26

LABO1184-044 06/01/2025

	Rates	Fringes
Power Equipment Operator:		
Forklift.....	\$ 30.88	9.26

LABO1184-047 06/01/2025

	Rates	Fringes
Truck Driver:		
Concrete.....	\$ 30.88	9.26

LABO1184-049 06/01/2025

	Rates	Fringes
Truck Driver:		
Water.....	\$ 30.88	9.26

SUAZ2023-022 11/19/2024

	Rates	Fringes
Carpenter: Formwork Concrete.....	\$ 29.86	8.89
Cement Mason/Concrete finisher...	\$ 30.41	0.00
Electrician.....	\$ 29.00	7.58
Laborer: Concrete Saw (Hand Held/Walk Behind).....	\$ 25.22	5.08
Laborer: General.....	\$ 23.32	7.09
Laborer: Landscape Laborer.....	\$ 19.00	6.34
Laborer: Mason Tender.....	\$ 25.92	7.09
Laborer: Pipelayer.....	\$ 25.97	7.09
Painter: Pavement Marking.....	\$ 23.35	6.34
Painter: Sign and Display Erector.....	\$ 18.03	0.00
Power Equipment Operator:		
Bobcat/Skid Steer/Skid Loader....	\$ 29.91	9.11
Power Equipment Operator:		
Boom/Crane Truck.....	\$ 43.11	10.87

Power Equipment Operator: Broom/Sweeper.....	\$ 25.95	6.62
Power Equipment Operator: Compactor/Roller.....	\$ 30.24	0.00
Power Equipment Operator: Concrete Pump Truck.....	\$ 43.11	10.87
Power Equipment Operator: Concrete Screed.....	\$ 26.41	7.64
Power Equipment Operator: Drill Rig/Auger.....	\$ 36.80	13.07
Power Equipment Operator: Milling Machine.....	\$ 31.16	0.00
Power Equipment Operator: Paver/Spreader/Finish equipment (asphalt, aggregate, & concrete).....	\$ 32.67	0.00
Power Equipment Operator: Scraper.....	\$ 29.69	0.00
Truck Driver: Dump.....	\$ 26.71	7.09
Truck Driver: Oil Distributor....	\$ 29.41	7.63
Truck Driver: Sweeper.....	\$ 20.24	5.48

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"

BID PROPOSAL
CITY OF PHOENIX, ARIZONA
OFFICE OF THE CITY ENGINEER
PROJECT TITLE: PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II
PROJECT NO.: AV41000079 ADOT
BOND ISSUE OR BUDGET PROJECT

PROPOSAL to the City Engineer of the City of Phoenix.

In compliance with the Advertisement for Bids, by the City Engineer, the undersigned bidder:

(Print or type contractor name)

Having examined the contract documents, site of work and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute the contract documents and furnish the required bonds and certificates of insurance for the completion of said work, at the locations and for the prices set forth on the inside pages of this form.

Understands that construction of this project will be in accordance with all applicable Maricopa Association of Governments' (MAG) Uniform Standard Specifications and Uniform Standard Details, latest revision, and the City of Phoenix Supplements, latest revision to the MAG Uniform Standard Specifications and Details, except as otherwise required by the project plans and specifications.

No proposal may be withdrawn for a period of 50 days after opening without consent of the Contracting Agency through the body or agent duly authorized to accept or reject the proposal except in the case of federally-assisted projects.

Understands that his proposal will be submitted with a proposal guarantee of certified check, cashier's check or surety bond for an amount not less than ten (10) percent of the amount bid, as referenced in the Call for Bids.

Agrees that upon receipt of Notice of Award, from the City of Phoenix, he will execute the contract documents within 10 calendar days.

Work will be completed within **125 calendar days**, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completion of the work includes lead time for obtaining the necessary materials and/or equipment and approvals.

The bidder will acknowledge all addenda in writing. By writing the addenda number(s) below, the bidder agrees that this proposal is computed with consideration of the specification book(s) plus any and all addenda.

<u>ADDENDA NO.</u>	<u>DATE</u>	<u>ADDENDA NO.</u>	<u>DATE</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**CITY OF PHOENIX
BID PROPOSAL**

**PROJECT TITLE: PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II DESIGN-BID-BUILD
PROJECT NO.: AV41000079 ADOT**

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	C-100	Contractor Quality Control Program (CQCP)	LS	1		
2	C-102-6.1	Stormwater Pollution Prevention	LS	1		
3	C-105	Mobilization (4% Maximum)	LS	1		
4	SP-30.1	Construction Survey Layout	LS	1		
5	SP-31.1	Miscellaneous Removals and Other Work (Allowance)	ALLOWANCE	1	\$50,000.00	\$50,000.00
6	SP-32.1	Unforeseen Utility Locating (Allowance)	ALLOWANCE	1	\$5,500.00	\$5,500.00
7	SP-34.1	Airport Safety and Security (M-003)	LS	1		
8	SP-35.1	Raise Existing Utility Vault	EA	3		
9	SP-35.2	Lower Existing Utility Vault	EA	3		
10	SP-35.4	Adjust Existing Monitoring Well to Grade	EA	2		
11	SP-36.1	Existing Utility Relocations or Removal (Allowance)	ALLOWANCE	1	\$33,000.00	\$33,000.00
12	SP-39.1	Apply Herbicide and Pre-Emergent	SY	86,743		
13	P-101-5.1	Remove Asphalt Pavement (Full Depth up to 3")	SY	6,781		
14	P-101-5.7.1	Remove Existing 18" RGRCP	LF	37		
15	P-101-5.7.2	Remove Existing Catch Basin	EA	11		
16	P-151-4.1	Clearing and Grubbing	LS	1		
17	P-152-7.1	Unclassified Excavation	CY	10,356		
18	P-152-7.2	Over Excavation of Unsuitable Materials and Backfill with Select Material (Allowance)	ALLOWANCE	1	\$25,000.00	\$25,000.00
19	P-152-7.3	Unforeseen Soil Conditions (Allowance)	ALLOWANCE	1	\$45,000.00	\$45,000.00
20	P-403-7.1	Asphalt Concrete Pavement (MAG D-1/2 inch)	TON	9,764		
21	D-701-6.1	18-inch RGRCP, Class V	LF	101		
22	D-701-6.2	24-inch RGRCP, Class V	LF	12		
23	D-701-6.3	18-inch Concrete Pipe Collar per MAG Std Dtl 505	EA	1		
24	D-701-6.4	24-inch Concrete Pipe Collar per MAG Std Dtl 505	EA	1		
25	D-751-6.1	Construct Concrete Catch Basin per MAG Std Dtl 537 (Single)	EA	1		
26	D-751-6.2	Construct Concrete Catch Basin per MAG Std Dtl 537 (Double)	EA	4		
27	D-751-6.3	Construct Concrete Catch Basin per COP Std Dtl P1570 (Triple) T=6"	EA	3		
28	D-751-6.4	Construct Concrete Catch Basin per COP Std Dtl P1570 (Triple) T=8"	EA	3		

**CITY OF PHOENIX
BID PROPOSAL**

**PROJECT TITLE: PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II DESIGN-BID-BUILD
PROJECT NO.: AV41000079 ADOT**

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
29	D-751-6.5	Construct Aircraft Rated Storm Drain Manhole	EA	7		
30	L-100-5.1	Remove Existing Airfield Lighting Cable to Lower Conduit or Duct Bank Segments	LF	13,345		
31	L-100-5.2	Excavate and Remove Existing Conduit or Segment (If Required - Utility Relocation Item)	LF	2,350		
32	L-100-5.3	Excavate and Remove Existing Ductbank or Segment (If Required - Utility Relocation Item)	LF	1,275		
33	L-100-5.4	Remove and Salvage Existing Airfield Guidance Sign for Reinstallation, Remove Concrete Sign Base	EA	3		
34	L-100-5.5	Remove Abandoned Sign Base / Concrete Foundation	EA	2		
35	L-100-5.6	Remove and Salvage Existing Taxiway Edge Light and Isolation Transformer, Remove Existing Base Can	EA	1		
36	L-100-5.7	Remove and Salvage Existing Taxiway Edge Light and Isolation Transformer, Install Temp Cover on Existing Base Can	EA	5		
37	L-100-5.8	Remove and Salvage Existing Elevated Runway Guard Light and Isolation Transformer, Remove Existing Base Can	EA	1		
38	L-100-5.9	Excavate and Remove Existing 4'x4' Concrete Hand Hole	EA	3		
39	L-100-5.10	Adjust Existing Concrete Duct Marker to Grade	EA	1		
40	L-100-5.11	Temporary Airfield Lighting and Cable Jumpers	LS	1		
41	L-107-5.1	Remove and Salvage Existing Supplemental Wind Cone, Remove Concrete Foundation	EA	1		
42	L-107-5.2	Install New L-806(L) Internally Lighted LED Supplemental Wind Cone and Isolation Transformer on New Concrete Base	EA	1		
43	L-108-5.1	L-824, Type C, 1/C #8 AWG, 5kV Cable (w/ Bare #6 Stranded Cu. Ground)	LF	500		
44	L-108-5.2	L-824, Type C, 2/C #8 AWG, 5kV Cable (w/ Bare #6 Stranded Cu. Ground or Insulated for 480V Circuits)	LF	15,365		
45	L-108-5.3	Bare #6 Solid Copper Counterpoise Conductor with Two Each Exothermic Splices (If Required - Existing Counterpoise Repair Item)	LF	1,000		
46	L-110-5.1	Single-way, (1) - 2" Conduit, Slurry Encased (If Required - Utility Relocation Item)	LF	2,715		
47	L-110-5.2	Multiple-way, (2) - 2" Conduit, Slurry Encased (If Required - Utility Relocation Item)	LF	245		
48	L-110-5.3	Multiple-way, (4) - 2" Conduit, Slurry Encased (If Required - Utility Relocation Item)	LF	750		
49	L-110-5.4	Multiple-way, (6) - 2" Conduit, Slurry Encased (If Required - Utility Relocation Item)	LF	235		
50	L-110-5.5	Multiple-way, (2) - 4" Conduit, Slurry Encased (If Required - Utility Relocation Item)	LF	50		
51	L-110-5.6	3" Min / 6" Max Concrete Cap (If Top of Existing Conduits Are Within 3" of 18" Minimum Depth Below Modified Grade)	LF	485		
52	L-115-5.1	New 4'x4'x4' Aircraft Rated Hand Hole and Lid with Cylinder Assisted Opening Hatch	EA	3		
53	L-115-5.2	Reconfigure RGL Isolation Boxes and Conduits in Existing Lowered Handhole (If Required - Utility Relocation Item)	EA	3		
54	L-115-5.3	New RGL Isolation Boxes and Conduits in New Handhole	EA	3		
55	L-115-5.4	New Handhole Identification Plaque Installed on Handhole Lid	EA	3		
56	L-115-5.5	Adjust Existing Electrical Junction Box to New Grade	EA	2		

**CITY OF PHOENIX
BID PROPOSAL**

**PROJECT TITLE: PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II DESIGN-BID-BUILD
PROJECT NO.: AV41000079 ADOT**

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
57	L-125-5.1	Install Salvaged Size 2, 2-Mod Sign and Isolation Transformer on New Sign Base	EA	2		
58	L-125-5.2	Install Salvaged Size 2, 3-Mod Sign and Isolation Transformer on New Sign Base	EA	1		
59	L-125-5.3	Install Salvaged Taxiway Edge Light and Isolation Transformer on New L-867 Base	EA	1		
60	L-125-5.4	Install Salvaged Taxiway Edge Light and Isolation Transformer on Existing Base	EA	5		
61	L-125-5.5	Install Salvaged Runway Guard Light and Isolation Transformer on New L-867 Base	EA	1		
62	L-125-5.6	Install 3" L-867B Extension on Existing Base with New Gaskets, Coated Bolts and Split Washers for Elevation Adjustment (If Required - Utility Relocation Item)	EA	5		
BASE BID (ITEMS 1 THROUGH 62 - INCLUSIVE)						
						& _____/100 DOLLARS
WRITTEN WORDS						

Prepared By:

Signature

Name

Position/Title

Firm Name

PROPOSAL SUBMITTAL

PROJECT TITLE: PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II
PROJECT NO.: AV41000079 ADOT

THIS PROPOSAL IS SUBMITTED BY _____

a corporation organized under the laws of the state of _____

partnership consisting of _____

a joint venture of _____

or individual trading as _____

of the City of _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

PHONE _____ FAX _____

EMAIL ADDRESS: _____

BY _____

Officer and Title (signature)

Date

WITNESS: If Contractor is an individual
(signature)

ATTEST: If Contractor is Corporation or Partnership
(signature and title)

SURETY BOND

PROJECT NO.: AV41000079 ADOT

That we, _____, as Principal, (hereinafter called the Principal) and the _____, a corporation duly organized under the laws of the state of _____, a Surety, (hereinafter called Surety) are held and firmly bound unto the City of Phoenix as Obligee, in the sum of ten (10) percent of the total amount of the bid of Principal, submitted by him to the City of Phoenix for the work described below, for the payment of which sum, well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents and in conformance with A.R.S. 34-201.

WHEREAS, the said Principal is herewith submitting its proposal for AV41000079 ADOT PHOENIX

GOODYEAR AIRPORT INFIELD PAVING PHASE II

NOW, THEREFORE, if the City of Phoenix will accept the proposal of the Principal and the Principal will enter into a Contract with the City of Phoenix in accordance with the terms of such proposal and give such Bonds and Certificates of Insurance as specified in the Standard Specifications with good and sufficient Surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter into such Contract and give such Bonds and Certificates of Insurance, if the Principal will pay to the City of Phoenix the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the Obligee may in good faith Contract with another party to perform the work covered by the proposal, then this obligation will be null and void, otherwise to remain in full force and effect.

Signed and sealed the _____ day of _____ A.D., 2025

Principal

TITLE

Surety

WITNESS

A.M. BEST RATING:



City of Phoenix

Disadvantaged Business Enterprise (DBE) Program

**FORM EO1 - 100 - STATEMENT OF OUTREACH COMMITMENT
(Due with initial submittal)**

Project Number: AV41000079 ADOT	Project Title: Phoenix Goodyear Airport Infield Paving Phase II

On behalf of the Submitter, I certify under penalty of perjury that the following information is true and correct.

If selected as the Successful Submitter, the Successful Submitter will:

- 1) Fulfill all required small business outreach requirements and shall submit all required outreach efforts documentation for contracting opportunities within 30 days or a date determined by the City following contract award recommendation;
- 2) Conduct all required small business outreach and will submit all supporting documentation; and
- 3) Comply with the Race - and Sex-Neutral post-award requirements stated in the DBE Contract Clause.

Company Name: _____ ROC#: _____

Company Mailing Address: _____

Representative Name: _____

Title: _____

Email Address: _____

Phone Number: _____

Signature: _____ Date: _____

Disadvantaged Business Enterprise (DBE) Program
Form EO2 - 100 - SMALL BUSINESS OUTREACH EFFORTS AND BIDDERS LIST

Name of Company (Submitter)/ROC#:	Contract # / Project #: AV41000079 ADOT	Contract Name: Phoenix Goodyear Airport Infield Paving Phase II
Contact Person:	Phone #:	Email:

Successful submitter must conduct outreach efforts and submit supporting documentation of those efforts, as described in the 49 CFR Part 26, in accordance with the detailed instructions in the Contract Clauses. Successful submitter should make copies of this form as needed. **Sections A, B, and C must be completed for all businesses which includes ALL BIDDERS.**

Sections D, E, and F are required to be completed for **all DBE and SBE firms**. Supporting documentation is required for columns D and F.

(A) Small Business Name and Contact Information	(B) Business Status	(C) Scope(s) of Work Solicited	(D) Solicitation Method	(E) Selection Decision	(F) Communication Final Selection Outcome
Name: Address: City, State, Zip: Number of Employees: Phone Number: Email or Fax: Number of Years in Business: Range of Annual Gross Receipts: < \$1 million Race of Majority Owner: Race of Majority Owner:	☐ DBE ☐ SBC - Small Business Concern ☐ SBE - City of Phoenix Certified	NAICS Codes and Scope(s) of Work:	☐ E-mail Blast ☐ Phone Call ☐ In-Person ☐ Newspaper ☐ Website ☐ Trade Listing ☐ Outreach Event ☐ Other	☒ Firm was selected ☐ Firm was not selected Provide explanation of why firm NOT selected	Date Firm was Notified: Method used to Communicate Selection: ☐ Email ☐ Phone ☐ Fax ☐ Letter ☐ In person
Name: Address: City, State, Zip: Number of Employees: Phone Number: Email or Fax: Number of Years in Business: Range of Annual Gross Receipts: < \$1 million Race of Majority Owner: Race of Majority Owner:	☐ DBE ☐ SBC - Small Business Concern ☐ SBE - City of Phoenix Certified	NAICS Codes and Scope(s) of Work:	☐ E-mail Blast ☐ Phone Call ☐ In-Person ☐ Newspaper ☐ Website ☐ Trade Listing ☐ Outreach Event ☐ Other	☒ Firm was selected ☐ Firm was not selected Provide explanation of why firm NOT selected	Date Firm was Notified: Method used to Communicate Selection: ☐ Email ☐ Phone ☐ Fax ☐ Letter ☐ In person

***Firms must be notified of final selection outcome prior to submittal of columns E & F of this form.**



City of Phoenix

Disadvantaged Business Enterprise (DBE) Program

FORM EO3 - 100 - SMALL BUSINESS UTILIZATION COMMITMENT

Project Number: AV41000079 ADOT	Project Title: Phoenix Goodyear Airport Infield Paving Phase II

On behalf of the Successful Submitter, I certify under the penalty of perjury that the information submitted herein is true and correct:

1. The firms indicated as "Selected" in **Form EO2 - 100 - Small Business Outreach Efforts**, will participate in this contract;
2. The Successful Submitter will comply with the Race- and Sex-Neutral post-award compliance requirements as stated in the DBE contract clause;
3. Successful Submitter understands and agrees that any and all changes or substitutions to subcontracts with DBE's and Small Businesses **must** be authorized by the Phoenix DBE Compliance Specialist prior to implementation; and
4. The following statement is true and correct:

The proposed total participation of firms on this contract will be:

DBE: _____ %

SBC: _____ %

SBE: _____ %

Company Name: _____ ROC#: _____

Company Mailing Address: _____

Representative Name: _____

Title: _____

Email Address: _____

Phone Number: _____

Signature: _____ Date: _____

CITY OF PHOENIX
LIST OF MAJOR SUBCONTRACTORS AND SUPPLIERS

PROJECT NO.: AV41000079 ADOT

PROJECT TITLE: PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II DESIGN-BID-BUILD

DESCRIPTION OF WORK OR MATERIALS (CONTRACTOR TO ENTER TRADE/SUPPLIER AREAS)	SELF-PERFORMED BY PRIME CONTRACTOR	SUBCONTRACTOR/SUPPLIER COMPANY NAME (IF NOT SELF-PERFORMED)	CONTACT PERSON	PHONE NUMBER	DOLLAR VALUE OF WORK OR MATERIALS IN BID
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				

I hereby certify by signing below that the above listed companies will be utilized to perform work on this project for an **equal to or greater than 5% of the base bid**. These companies will not be removed or replaced without prior written approval by the City of Phoenix Project Manager. The City requires that ALL vendors providing work equal to or greater than 5% of the base bid are listed or you will be disqualified. If you are self-performing work, you must still list any suppliers for materials or list any subcontractors with whom you will directly contract.

COMPANY NAME _____ SIGNATURE _____

NAME & TITLE _____ PHONE NUMBER _____ DATE _____

EMAIL ADDRESS _____

CITY OF PHOENIX
LIST OF ALL SUBCONTRACTORS AND SUPPLIERS

PROJECT NO.: AV41000079 ADOTPROJECT TITLE: PHOENIX GOODYEAR AIRPORT INFIELD PAVING PHASE II DESIGN-BID-BUILD

DESCRIPTION OF WORK OR MATERIALS (CONTRACTOR TO ENTER TRADE/SUPPLIER AREAS)	SELF-PERFORMED BY PRIME CONTRACTOR	SUBCONTRACTOR/SUPPLIER COMPANY NAME (IF NOT SELF-PERFORMED)	CONTACT PERSON	PHONE NUMBER	DOLLAR VALUE OF WORK OR MATERIALS IN BID
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				
	☐ YES ☐ NO				

I hereby certify by signing below that the above listed companies will be utilized to perform work on this project. These companies will not be removed or replaced on the project without prior written approval by the City of Phoenix Project Manager. The City requires that ALL vendors providing work are listed or you will be disqualified. If you are self-performing work, you must still list any suppliers for materials or list any subcontractors with whom you will directly contract.

COMPANY NAME _____ SIGNATURE _____

NAME & TITLE _____ PHONE NUMBER _____ DATE _____

EMAIL ADDRESS _____

BIDDER'S DISCLOSURE STATEMENT

Authorized Contact for this Disclosure Statement

Name: _____

Title: _____

E-mail: _____

Phone number: _____

List any EIN, DBA, trade name, or other identity used in the last five years, the state or country where filed, and the status (active or inactive): (if applicable): _____

Business Characteristics

Business entity type – Please check appropriate box and provide additional information:

☐	Corporation	Date of incorporation: _____
☐	Limited Liability Company	Date organized: _____
☐	Limited Liability Partnership	Date of registration: _____
☐	Limited Partnership	Date established: _____
☐	General Partnership	Date established: _____
☐	Sole Proprietor	How many years in business?: _____
☐	Other (explain)	date established: _____

Was the business entity formed in the State of Arizona? Yes _____ No _____

If no, indicate jurisdiction where Business Entity was formed: _____

Business License Number and Classification: _____

Business Transaction Privilege License Number: _____

Special Use or other zoning permits required for Bidder's operation and performance of the services under this Agreement:

Is the Business Entity currently registered to do business in Arizona with the Arizona Corporation Commission? Yes _____ No _____ Not required _____ (if sole proprietor or general partnership)

Does the Business Entity have a City of Phoenix business privilege license? Yes _____ No _____ If "no" explain and provide detail such as "not required" or "application in progress" or other reason.

Is the Business Entity publicly traded? Yes _____ No _____

Is the responding Business Entity a Joint Venture? Note: If the Submitting Business entity is a Joint Venture, also submit a questionnaire for each Business Entity comprising the Joint Venture. Yes _____ No _____

Is the Business Entity's Principal Place of Business/Executive office in Phoenix? If "no" does the Business Entity maintain an office in Phoenix? Yes _____ No _____

Provide the address and phone number for the Phoenix office. _____

Is the business certified by Phoenix as a Small Business Enterprise? Yes _____ No _____

Identify Business Entity Officials and principal Owners:

Name(s) _____ Title _____ Percentage ownership ____%(Enter 0% if not applicable).

Name(s) _____ Title _____ Percentage ownership ____%(Enter 0% if not applicable).

Name(s) _____ Title _____ Percentage ownership ____%(Enter 0% if not applicable).

Name(s) _____ Title _____ Percentage ownership ____%(Enter 0% if not applicable).

Affiliates and Joint Venture Relationships

Does the Business entity have any Affiliates? Yes _____ No _____ Attach additional pages if necessary.

Affiliate name: _____

Affiliate EIN (if available): _____.

Affiliate's primary Business Activity: _____

Explain relationship with Affiliate and indicate percent ownership, if applicable. _____

Are there any Business Entity Officials or Principal Owners that the Business Entity has in common with this Affiliate? _____

Individual's name: _____

Position/Title with Affiliate: _____

Has the Business Entity participated in any joint Ventures within the past three years? Yes _____ No _____
(Attach additional pages if necessary)

Joint Venture Name: _____

Joint venture EIN (if applicable): _____

Identify parties to the Joint Venture: _____

Contract History

Has the Business Entity held any contracts with the city of Phoenix in the last three (3) years? Yes _____ No _____ If "yes" attach a list.

Integrity – Contract Bidding

Within the past three (3) years, has the Business Entity or any Affiliate been suspended or debarred from any government contracting process or been disqualified on any government procurement? Yes _____ No _____

Been subject to a denial or revocation of a government prequalification? Yes _____ No _____

Been denied a contract award or had a bid rejected based upon a finding of a non-responsibility by a government entity? Yes _____ No _____

Agreed to a voluntary exclusion from bidding/contracting with a government entity? Yes _____ No _____

Initiated a request to withdraw a bid submitted to a government entity or made any claim of an error on a bid submitted to a government entity? Yes _____ No _____

Initiated a request to withdraw a bid submitted to a government entity or made any claim of an error on a bid submitted to a government entity? Yes _____ No _____

For each "Yes" answer above, provide an explanation of the issues.

Integrity – Contract AwardWithin the past three (3) years has the Business Entity or any Affiliate been suspended, cancelled, or terminated for cause on any government contract?
Yes _____ No _____Been subject to an administrative proceeding or civil action seeking specific performance or restitution in connection with any government contract?
Yes _____ No _____

For each "yes" answer, provide an explanation. (Attach explanation on a separate sheet of paper).

Certifications/LicensesWithin the past three (3) years, has the Business Entity or Affiliate had a revocation, suspension, or disbarment of any business or professional permit and/or license?
Yes _____ No _____

If "yes" provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, relevant dates, the government entity involved, and any remedial or corrective action(s) taken and the current status of the issues.

Legal Proceedings

Within the past three (3) years, has the Business Entity of any Affiliate:

Been the subject of an investigation, whether open or closed, by any government entity for a civil or criminal violation? Yes_____ No_____

Been the subject of an indictment, grant of immunity, judgment or conviction, (including entering into a plea bargain for conduct constituting a crime)?
Yes_____ No_____

Received any OSHA citation and Notification of Penalty containing a violation classified as serious or willful? Yes_____ No_____

Had a government entity find a willful prevailing wage or supplemental payment violation? Yes_____ No_____

Been involved in litigation as either a plaintiff or a defendant involving a copyright or patent infringement violation or an anti-trust violation? Yes_____ No_____

Other than previously disclosed, for the past three (3) years:

(i) Been subject to the imposition of a fine or penalty in excess of \$1000 imposed by any government as a result of the issuance of citation, summons or notice of violation, or pursuant to any administrative, regulatory, or judicial determination? Yes_____ No_____

(ii) Been charged or convicted of a criminal offense pursuant to any administrative and/or regulatory action taken by any government entity? Yes_____ No_____

If “yes” provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, relevant dates, the government entity involved, and any remedial or corrective action(s) taken and the current status of the issues.

Leadership Integrity

If the Business Entity is a joint Venture Entity, answer “N/A – Not Applicable” to questions below:

Within the past three (3) years has any individual previously identified, or any other Business Entity Leader not previously identified, or any individual having the authority to sign, execute, or approve bids, proposals, contracts or supporting documentation with the city of Phoenix been subject to:

A sanction imposed relative to any business or professional permit and/or license? Yes_____ No_____

An investigation, whether open or closed, by any government entity for a civil or criminal violation for any business related conduct? Yes_____ No_____

Home

Search

Data Bank

Data Services

Help



Official U.S. Government Website
100% Free

The Official U.S. Government System for:

Contract Opportunities

(was fbo.gov)

Contract Data

(Reports ONLY from fpds.gov)

Wage Determinations

(was wdol.gov)

Federal Hierarchy

Departments and Subtiers

Assistance Listings

(was cfda.gov)

Entity Information

Entities, Disaster Response Registry,
Exclusions, and Responsibility/
Qualification (was fapiis.gov) **NEW**

Entity Reporting

SCR and Bio-Preferred Reporting

Register Your Entity or Get a Unique Entity ID

Register your entity or get a Unique Entity ID to get started doing business with the federal government.

Get Started

Renew Entity



Check Entity Status

■ ACTIVE EXCLUSIONS

There are no active exclusion records associated to this entity by its Unique Entity ID.



City of Phoenix

AFFIDAVIT OF IDENTITY

Your completion of this form is required by Arizona state law. A.R.S. §§ 1-501 and -50 only if you are a sole proprietor.

I, _____ (print full name exactly as on document), hereby affirm, upon penalty of perjury, that I presented the document marked below to the City of Phoenix, that I am lawfully present in the United States, and that I am the person stated on the document. (select one category only)

- ☐ Arizona driver license issued after 1996.
Print first four numbers/letters from license:

- ☐ Arizona non-operating identification license.
Print first four numbers/letters:

- ☐ Birth certificate or delayed birth certificate issued in any state, territory or possession of the U.S.
Year of birth: _____; Place of birth: _____
- ☐ United States Certificate of Birth Abroad.
Year of birth: _____; Place of birth: _____
- ☐ United States Passport.
Print first four numbers/letters on Passport:

- ☐ Foreign Passport with United States Visa.
Print first four numbers/letters on Passport:

Print first four numbers/letters on Visa:

- ☐ I-94 Form with a photograph.
Print first four numbers on I-94:

- ☐ USCIS Employment Authorization Document (EAD).
Print first four numbers/letters on EAD:

or Perm. Resident Card (acceptable alternative):

- ☐ Refugee Travel Document.
Date of issuance: _____; Refugee country: _____
- ☐ U.S. Certificate of Naturalization.
Print first four digits of CIS Reg. No.:

- ☐ U.S. Certificate of Citizenship.
Date of issuance: _____; Place of issuance: _____
- ☐ Tribal Certificate of Indian Blood.
Date of issuance: _____; Name of tribe: _____
- ☐ Tribal or Bureau of Indian Affairs Affidavit of Birth.
Year of birth: _____; Place of birth: _____

Signed: _____ Dated: _____

SECTION III-A

GENERAL PROVISION SPECIFICATIONS

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GENERAL PROVISIONS SPECIFICATIONS
SECTION 10

DEFINITION OF TERMS

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

10-1.1 AASHTO

The American Association of State Highway and Transportation Officials, the successor association to AASHO.

10-1.2 ACCESS ROAD

The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-1.3 ADVERTISEMENT

A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-1.4 AIP

The Airport Improvement Program, a grant-in-aid program, administered by the Federal Aviation Administration.

10-1.5 AIR OPERATIONS AREA

For the purpose of these specifications, the term air operations area 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.

10-1.6 AIRPORT

Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

10-1.7 ASTM

The American Society for Testing and Materials.

10-1.8 AWARD

The acceptance by the owner of the successful bidder's proposal.

10-1.9 BIDDER

Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-1.10 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.

10-1.11 CALENDAR DAY

Every day shown on the calendar.

10-1.12 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 the work affected by such changes. The work, covered by a change order, shall be within the scope of the contract.

10-1.13 CONTRACT

The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: The Advertisement; The Contract Form; The Proposal; The Performance Bond; The Payment Bond; any required insurance certificates; The Specifications; The Plans, and any addenda issued to bidders.

10-1.14 CONTRACT ITEM (PAY ITEM)

A specific unit of work for which a price is provided in the contract.

10-1.15 CONTRACT TIME

The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-1.16 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.

10-1.17 DRAINAGE SYSTEM

The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-1.18 ENGINEER

The individual, partnership, firm, or corporation duly authorized by the owner (sponsor) to be responsible for engineering supervision of the contract work and acting directly or through an authorized representative.

10-1.19 EQUIPMENT

All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-1.20 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 Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-1.21 FAA

The Federal Aviation Administration of the U.S. Department of Transportation. When used to

designate a person, FAA shall mean the Administrator or his/her duly authorized representative.

10-1.22 FEDERAL SPECIFICATIONS

The Federal Specifications and Standards, and supplements, amendments and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-1.23 INSPECTOR

An authorized representative of the Engineer assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-1.24 INTENTION OF TERMS

Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of the like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer 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, subject in each case to the final determination of the owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-1.25 LABORATORY

The official testing laboratories of the owner or such other laboratories as may be designated by the Engineer.

10-1.26 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.

10-1.27 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 percent of the total amount of the award contract. All other items shall be considered minor contract items.

10-1.28 MATERIALS

Any substance specified for use in the construction of the contract work.

10-1.29 NOTICE TO PROCEED

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.

10-1.30 OWNER (SPONSOR)

The term owner shall mean the party of the first part or the contracting agency signatory to the contract. For AIP contracts, the term sponsor shall have the same meaning as the term owner.

10-1.31 PAVEMENT

The combined surface course, base course, and sub base course, if any, considered as a single unit.

10-1.32 PAYMENT BOND

The approved form of security furnished by the Contractor and his/her surety as a guaranty that he will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-1.33 PERFORMANCE BOND

The approved form of security furnished by the Contractor and his/her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-1.34 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.

10-1.35 PROJECT

The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-1.36 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.

10-1.37 PROPOSAL GUARANTEE

The security furnished with a proposal to guarantee that the bidder will enter into a contract if his/her proposal is accepted by the owner.

10-1.38 RUNWAY

The area on the airport prepared for the landing and takeoff of aircraft.

10-1.39 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.

10-1.40 STRUCTURES

Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; under drains; electrical ducts, manholes, hand holes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-1.41 SUBGRADE

The soil which forms the pavement foundation.

10-1.42 SUPERINTENDENT

The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-1.43 SUPPLEMENTAL AGREEMENT

A written agreement between the Contractor and the owner covering: (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-1.44 SURETY

The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds which are furnished to the owner by the Contractor.

10-1.45 TAXIWAY

For the purpose of this document, the term taxiway means 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 or aircraft parking areas.

10-1.46 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.

10-1.47 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 6 hours toward completion of the contract. Unless work is suspended for causes beyond the Contractor's control, Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work, requiring the presence of an inspector, will be considered as working days.

END OF SECTION 10

SECTION 20

This section is not used.

END OF SECTION 20

SECTION 30

This section is not used.

END OF SECTION 30

SECTION 40

SCOPE OF WORK

40-1.1 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.

40-1.2 ALTERATION OF WORK AND QUANTITIES

The owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25 percent (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations which do not exceed the 25 percent limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations which are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25 percent limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. 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.

All supplemental agreements shall be approved by the FAA and shall include valid wage determinations of the U.S. Secretary of Labor when the amount of the supplemental agreement exceeds \$2,000. However, if the CONTRACTOR elects to waive the limitations on work that increases or decreases the originally awarded CONTRACT or any major CONTRACT item by more than 25 percent, the supplemental agreement shall be subject to the same U.S. Secretary of Labor Wage determination as was included in the originally awarded CONTRACT.

40-1.3 OMITTED ITEMS

The Engineer may, in the owner's best interest, omit from the work any contract item, except major contract items. 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 the subsection titled PAYMENT FOR OMITTED ITEMS of Section 90.

40-1.4 EXTRA WORK

Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called Extra Work. Extra work that is within the general scope of the contract shall be covered by written change order. Change orders for such 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 Engineer's opinion, is necessary for completion of such extra work.

When determined by the Engineer to be in the owner's best interest, he may order the Contractor to proceed with extra work by force account as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90.

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 hereinbefore defined in the subsection titled SUPPLEMENTAL AGREEMENT of Section 10.

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.

40-1.5 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. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas of the airport with respect to his/her own operations and the operations of all his/her subcontractors as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80. 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 the subsection titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

With respect to his/her own operations and the operations of all his/her 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.

When the contract requires the maintenance of vehicular traffic on 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 such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall furnish erect, and maintain barricades, warning signs, flagmen, and other traffic control devices in reasonable conformity with the manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office), unless otherwise specified herein. 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.

The Contractor shall make his/her own estimate of all labor, materials, equipment, and incidentals necessary for providing the maintenance of aircraft and vehicular traffic as specified in this subsection.

The cost of maintaining the aircraft and vehicular traffic specified in this subsection shall not be measured or paid for directly, but shall be included in the various contract items.

40-1.6 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 Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract.

Except as provided in the subsection titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, 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 utilized in the work as otherwise provided for in the contract and shall remain the property of the owner when so utilized in the work.

40-1.7 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 either embankment or waste, he may at his/her option either:

- a. Use such material in another contract item, providing such use is approved by the Engineer 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 Engineer; or
- c. Use such material for his/her 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., he shall request the Engineer's approval in advance of such use.

Should the Engineer 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 his/her own 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 his/her use of such material so used in the work or removed from the site.

Should the Engineer 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 his/her 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.

40-1.8 FINAL CLEANING UP

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. He 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 such property owner.

END OF SECTION 40

SECTION 50

CONTROL OF WORK

50-1.1 AUTHORITY OF THE ENGINEER

The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. He shall decide all questions which may arise as to the interpretation of the specifications or plans relating to the work, the fulfillment of the contract on the part of the Contractor, and the rights of different Contractors on the project. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

50-1.2 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 Engineer 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 his/her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the owner, he will advise the owner of his/her determination that the affected work be accepted and remain in place. In this event, the Engineer will document his/her determination and recommend to the owner a basis of acceptance which will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommended contract price adjustments will be based on good engineering judgment and such tests or retests of the affected work as are, in his/her opinion, needed. Changes in the contract price shall be covered by contract modifications (change order or supplemental agreement) as applicable.

If the Engineer 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 Engineer's written orders.

For the purpose of this subsection, 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 Engineer's right to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's prosecution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority to use good engineering judgment in his/her determinations as to acceptance of work that is not in strict conformity but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

50-1.3 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS

The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. 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 FAA advisory circulars; contract general provisions shall govern over plans, cited standards for materials or testing, and cited FAA advisory circulars; plans shall govern over cited standards for materials or testing and cited FAA advisory circulars. 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 standards for testing occur due to the timing of changing, editing, and replacing of standards. In the event the Contractor discovers any apparent discrepancy within standard test methods, he shall immediately call upon the Engineer for his/her 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, he shall immediately call upon the Engineer for his/her interpretation and decision, and such decision shall be final.

50-1.4 COOPERATION OF CONTRACTOR

The Contractor will be supplied with two copies each of the plans and specifications. He shall have available on the work at all times, one copy each of the plans and specifications. Additional 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 he shall cooperate with the Engineer and his/her inspectors and with other contractors in every way possible. The Engineer shall allocate the work and designate the sequence of construction in case of controversy between contractors. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his/her 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 Engineer or his/her authorized representative.

50-1.5 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 his/her work so as 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 his/her contract and shall protect and save harmless the owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced

by him because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his/her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. He shall join his/her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-1.6 CONSTRUCTION LAYOUT AND STAKES

The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layouts required for the construction of the work. Such stakes and markings as the Engineer may set for either his/her own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or his/her employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

50-1.7 AUTOMATICALLY CONTROLLED EQUIPMENT

Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-1.8 AUTHORITY AND DUTIES OF INSPECTORS

Inspectors employed by the owner shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors employed by the owner are authorized to notify the Contractor or his/her 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 Engineer for his/her decision.

50-1.9 INSPECTION OF THE WORK

All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Engineer 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 Engineer 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.

Any work done or materials used without supervision or inspection by an authorized representative of the owner may be ordered removed and replaced at the Contractor's expense unless the owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

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.

50-1.10 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK

All work which does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

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 the subsection titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as given, 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 forthwith with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs (incurred by the owner) from any monies due or to become due the Contractor.

50-1.11 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 which 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 shall be responsible for all damage done by his/her hauling equipment and shall correct such damage at his/her own expense.

50-1.12 MAINTENANCE DURING CONSTRUCTION

The Contractor shall maintain the work during construction and until the work is accepted. This 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 sub-grade previously constructed, the Contractor shall maintain the previous course or sub-grade 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.

50-1.13 FAILURE TO MAINTAIN THE WORK

Should the Contractor at any time fail to maintain the work as provided in the subsection titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such non-compliance. 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 Engineer's notification, the Engineer 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 deducted from monies due or to become due the Contractor.

50-1.14 PARTIAL ACCEPTANCE

If at any time during the prosecution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the owner, he may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, he may accept it as being completed, 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.

50-1.15 FINAL ACCEPTANCE

Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and owner will make an inspection. If all construction provided for and contemplated by the contract is found to be completed in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer 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 Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. 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 Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-1.16 CLAIMS FOR ADJUSTMENT AND DISPUTES

If for any reason the Contractor deems that additional compensation is due him for work or materials not clearly provided for in the contract, plans, or specifications or previously

authorized as extra work, he shall notify the Engineer in writing of his/her intention to claim such additional compensation before he begins the work on which he bases the claim. If such notification is not given or the Engineer 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 Engineer 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 his/her written claim to the Engineer 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

60-1.1 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS

The materials used on 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 complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. 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 conforms to the requirements of cited materials specifications. In addition, where an FAA specification for airport lighting equipment is cited in the plans or specifications, the Contractor shall furnish such equipment that is:

- a. Listed in FAA Advisory Circular (AC) 150/5345-53D, Airport Lighting Equipment Certification Program, and Addendum that is in effect on the date of advertisement; and,
- b. Produced by the manufacturer as listed in the Addendum cited above for the certified equipment part number.

60-1.2 SAMPLES, TESTS, AND CITED SPECIFICATIONS

All materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer 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 Engineer, shall be removed at the Contractor's expense. Unless otherwise designated, tests in accordance with the cited standard methods of AASHTO or ASTM which are current on the date of advertisement for bids will be made by and at the expense of the owner. Samples will be taken by a qualified representative of the owner. 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 his/her request.

60-1.3 CERTIFICATION OF COMPLIANCE

The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance 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.

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 Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," 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;
- b. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, he shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-1.4 PLANT INSPECTION

The Engineer or his/her 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 his/her acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

- a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom he has contracted for materials.
- b. The Engineer 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 Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the owner shall have the right to retest any material which has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-1.5 ENGINEER'S FIELD OFFICE AND LABORATORY

When specified and provided for as a contract item and as described in project special provisions, the Contractor shall furnish a building or field office space for the exclusive use of

the Engineer as a field office and field testing laboratory. The building or field office space shall be furnished and maintained by the Contractor as specified herein and shall become property of the Contractor when the contract work is completed.

60-1.6 STORAGE OF MATERIALS

Materials shall be so stored as 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 so as to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. 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, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. 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 Engineer 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 his/her entire expense, except as otherwise agreed to (in writing) by the owner or lessee of the property.

60-1.7 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 Engineer.

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 Engineer has approved its use in the work.

60-1.8 OWNER FURNISHED MATERIALS

The Contractor shall furnish all materials required to complete the work, except those specified herein (if any) to be furnished by the owner. Owner-furnished materials shall be made available to the Contractor at the location specified herein.

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 which 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

70-1.1 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. He 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 his/her 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 himself or his/her employees.

70-1.2 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 prosecution of the work.

70-1.3 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, he shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the surety shall indemnify and save 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 prosecution or after the completion of the work.

70-1.4 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.

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 Engineer.

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 so as 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 Engineer, 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.

70-1.5 FEDERAL AID PARTICIPATION

For AIP contracts, the United States Government has agreed to reimburse the owner for some portion of the contract costs. Such reimbursement is made from time to time upon the owner's (sponsor's) request to the FAA. In consideration of the United States Government's (FAA's) agreement with the owner, the owner has included provisions in this contract pursuant to the requirements of the Airport Improvement Act of 1982, as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987, and the Rules and Regulations of the FAA that pertain to the work.

As required by the Act, the contract work is subject to the inspection and approval of duly authorized representatives of the Administrator, FAA, and is further subject to those provisions of the rules and regulations that are cited in the contract, plans, or specifications.

No requirement of the Act, the rules and regulations implementing the Act, or this contract shall be construed as making the Federal Government a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-1.6 SANITARY, HEALTH, AND SAFETY PROVISIONS

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his/her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his/her health or safety.

70-1.7 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall control his/her operations and those of his/her 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 his/her own operations and those of his/her subcontractors and all suppliers in accordance with the subsection titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-1.8 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS

The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office).

When the work requires closing an air operations area of the airport or portion of such

area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of AC 150/5340-1L, Standards for Airport Markings.

The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and his/her parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2F, Operational Safety on Airports during Construction.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to AC 150/5370-2F.

The Contractor shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work which requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their dismantling is directed by the Engineer.

Open-flame type lights shall not be permitted within the air operations areas of the airport.

70-1.9 USE OF EXPLOSIVES

When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet (300 m) from the work or from any building, road, or other place of human occupancy.

The Contractor shall notify each property owner and public utility company having structures or facilities in proximity to the site of the work of his/her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury.

The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-1.10 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 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 prosecution of the work, resulting from any act, omission, neglect, or misconduct in his/her manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have 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, he shall restore, at his/her own 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 he shall make good such damage or injury in an acceptable manner.

70-1.11 RESPONSIBILITY FOR DAMAGE CLAIMS

The Contractor shall indemnify and save harmless the Engineer and the owner and their officers, 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 his/her contract as may be considered necessary by the owner for such purpose may be retained for the use of the owner or, in case no money is due, his/her surety may be held until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid 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 is adequately protected by public liability and property damage insurance.

70-1.12 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 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.

70-1.13 OPENING SECTIONS OF THE WORK TO TRAFFIC

Should it be 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 shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his/her own estimate of the difficulties involved in arranging his/her work to permit such beneficial occupancy by the owner as described below:

Five phases of construction as indicated on the plans.

Upon completion of any portion of the work listed above, such portion shall be accepted by the owner in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, 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 his/her expense.

The Contractor shall make his/her 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.

70-1.14 CONTRACTOR'S RESPONSIBILITY FOR WORK

Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50, 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 his/her 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 his/her contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-1.15 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS

As provided in the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, 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 his/her 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.

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 his/her 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 his/her plan of

operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided hereinbefore in this subsection and the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification hereinbefore provided, it shall be the responsibility of the Contractor to keep such individual owners advised of changes in his/her plan of operations that would affect such owners.

Prior to commencing the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such owner of his/her 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 Engineer.

The Contractor's failure to give the two days' notice hereinabove provided shall be cause for the Engineer 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 excavation methods acceptable to the Engineer within 3 feet (90 cm) 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, he shall immediately notify the proper authority and the Engineer 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 Engineer 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 his/her operations whether or not due to negligence or accident. The contract owner reserves the right to deduct such costs from any monies due or which may become due the Contractor or his/her surety.

70-1.16 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.

70-1.17 PERSONAL LIABILITY OF PUBLIC OFFICIALS

In carrying out any of the contract provisions or in exercising any power or authority granted to him by this contract, there shall be no liability upon the Engineer, his/her 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.

70-1.18 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 his/her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his/her 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.

70-1.19 ENVIRONMENTAL PROTECTION

The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. He shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

Water sprinkler trucks shall be used to prevent and control dust on haul roads and in construction areas. In the event of strong winds during earthwork operations, it may be necessary to suspend such operations until the conditions are favorable for such operation.

70-1.20 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 his/her operations, any building, part of a building, structure, or object which is incongruous with its surroundings, he shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and will direct the Contractor to either resume his/her operations or to suspend operations as directed.

Should the Engineer 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 modification (change order or supplemental agreement) as provided in the subsection titled EXTRA WORK of Section 40 and the subsection titled PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT WORK of Section 90. If appropriate, the contract modification shall include an extension of contract time in accordance with the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

END OF SECTION 70

SECTION 80

PROSECUTION AND PROGRESS

80-1.1 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 Engineer.

Should the Contractor elect to assign his/her contract, said assignment shall concur 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. In case of approval, the Contractor shall file copies of all subcontracts with the Engineer.

80-1.2 NOTICE TO PROCEED

The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin.

80-1.3 PROSECUTION AND PROGRESS

Unless otherwise specified, the Contractor shall submit his/her progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. 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 Engineer's request, submit a revised schedule for completion of the work within the contract time and modify his/her operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the prosecution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

For AIP contracts, the Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the owner.

80-1.4 LIMITATION OF OPERATIONS

The Contractor shall control his/her operations and the operations of his/her subcontractors and all suppliers so as to provide for the free and unobstructed movement of aircraft in the AIR OPERATIONS AREAS of the airport.

When the work requires the Contractor to conduct his/her operations within an AIR OPERATIONS AREA of the airport, the work shall be coordinated with airport management (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AIR OPERATIONS AREA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in

place as provided in the subsection titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the contract work requires the Contractor to work within an AIR OPERATIONS AREA of the airport on an intermittent basis (intermittent opening and closing of the AIR OPERATIONS AREA), the Contractor shall maintain constant communications as hereinafter specified; immediately obey all instructions to vacate the AIR OPERATIONS AREA; immediately obey all instructions to resume work in such AIR OPERATIONS AREA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AIR OPERATIONS AREA until the satisfactory conditions are provided. The AIR OPERATIONS AREA (AOA) 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 approved in writing by the Airport Operations Staff.

80-1.5 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.

All equipment which 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 be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from 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 others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, he may request authority from the Engineer 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 Engineer 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 Engineer 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 subsection.

80-1.6 TEMPORARY SUSPENSION OF THE WORK

The Engineer shall have the authority to suspend the work wholly, or in part, for such period or periods as he may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the prosecution of the work, or for such time as is 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 Engineer, 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 Engineer's order to suspend work to the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with his/her claim information substantiating the amount shown on the claim. The Engineer 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, for suspensions made at the request of the Contractor, or for any other delay provided for in the contract, plans, or specifications.

If it should become 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. He 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.

80-1.7 DETERMINATION AND EXTENSION OF CONTRACT TIME

The number of calendar or working days allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

CONTRACT TIME based on WORKING DAYS shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of his/her weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK).

The Engineer shall base his/her weekly statement of contract time charged on the following considerations:

1. No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least 6 hours with the normal work force employed on such principal item. Should the normal

work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Engineer for reasons not the fault of the Contractor, shall not be charged against the contract time.

2. The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed.
3. The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed.
4. The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection titled FINAL ACCEPTANCE of Section 50.
5. The Contractor will be allowed 1 week in which to file a written protest setting forth his/her objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the subsection titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

- a) 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 Engineer'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.

- b) When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially completed.

If the Contractor finds it impossible for reasons beyond his/her control to complete the work

within the contract time as specified, or as extended in accordance with the provisions of this subsection, he may, at any time prior to the expiration of the contract time as extended, make a written request to the Engineer for an extension of time setting forth the reasons which he believes will justify the granting of his/her request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, he may extend the time for completion in such amount as the conditions justify. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-1.8 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 the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his/her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the owner should the Contractor fail to complete the work in the time provided in his/her contract.

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.

80-1.9 DEFAULT AND TERMINATION OF CONTRACT

The Contractor shall be considered in default of his/her 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 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 prosecution 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 him 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 Engineer consider the Contractor in default of the contract for any reason hereinbefore, he 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 Engineer 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 prosecution 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 Engineer 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.

80-1.10 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 prosecution 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 Engineer.

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

END OF SECTION 80

SECTION 90

MEASUREMENT AND PAYMENT

90-1.1 MEASUREMENT OF QUANTITIES

All work completed under the contract will be measured by the Engineer, or his/her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

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 (0.8 square meter) 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 Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

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

In computing volumes of excavation the average end area method or other acceptable methods will be used.

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 inches.

The term "ton" will mean the short ton consisting of 2,000 lb (907 kg) avoirdupois. All materials which are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designated by the Engineer. 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 Engineer directs, and each truck shall bear a plainly legible identification mark.

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 to the Engineer, 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.

When requested by the Contractor and approved by the Engineer 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 Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon or ton, unless otherwise specified in contract documents. When measured by volume, such volumes will be measured at 60 F or will be corrected to the volume at 60 F using ASTM D 1250 for asphalts or ASTM D 633 for tars.

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 bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton or hundredweight.

Timber will be measured by the thousand feet board measure (M.F.B.M.) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

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.

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 by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, 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 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.

Scales shall be accurate within one-half percent of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector 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 one-tenth of 1 percent of the nominal rated capacity of the scale, but not

less than 1 pound. The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales "overweighing" (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of one-half of 1 percent.

In the event inspection reveals the scales have been "under weighing" (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

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.

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 Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-1.2 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 prosecution thereof, subject to the provisions of the subsection titled NO WAIVER OF LEGAL RIGHTS of Section 70.

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.

90-1.3 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 the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 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 his/her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-1.4 PAYMENT FOR OMITTED ITEMS

As specified in the subsection titled OMITTED ITEMS of Section 40, the Engineer 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 Engineer 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 Engineer'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 Engineer'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 Engineer'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 of the amount of such costs.

90-1.5 PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK

Extra work, performed in accordance with the subsection titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work. When the change order or supplemental agreement authorizing the extra work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials plus a negotiated and agreed upon allowance for overhead and profit.

- a. **Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- b. **Comparison of Record.** The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.
- c. **Statement.** No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:
 - (1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.
 - (2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.

- (3) Quantities of materials, prices, and extensions.
- (4) Transportation of materials.
- (5) Cost of property damage, liability and workman's compensation insurance premiums, unemployment insurance contributions, and social security tax.

Statements shall be accompanied and supported by a receipted invoice for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

90-1.6 PARTIAL PAYMENTS

Partial payments will be made at least once each month as the work progresses. Said payments will be based upon estimates prepared by the Engineer of the value of the work performed and materials complete 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 the subsection titled PAYMENT FOR MATERIALS ON HAND of this section.

No partial payment will be made when the amount due the Contractor since the last estimate amounts to less than five hundred dollars.

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. The Owner 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. 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.

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 until the final payment is made, except as may be provided (at the Contractor's option) in the subsection titled PAYMENT OF WITHHELD FUNDS of this section. The balance (90 percent) of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his/her option, as provided in the subsection titled PAYMENT OF WITHHELD FUNDS of this section, no such percent retainage shall be deducted.

When at least 95 percent of the work has been completed, the Engineer 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.

When not less than 95 percent of the work has been completed the Engineer may, at his/her discretion and with the consent of the surety, prepare an estimate from which will be retained 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 Engineer 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 the subsection titled ACCEPTANCE AND FINAL PAYMENT of this section.

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 (the Contractor shall use the attached forms). 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.

90-1.7 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 Engineer at or on an approved site.
- b) The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c) The Contractor has furnished the Engineer 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 so stored or stockpiled.
- e) The Contractor has furnished the owner evidence that the material so 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 his/her 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 subsection.

90-1.8 PAYMENT OF WITHHELD FUNDS

At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in subsection 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.

90-1.9 ACCEPTANCE AND FINAL PAYMENT

When the contract work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of his/her 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 Engineer 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 Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer'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 the subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, 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 the subsection titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, 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.

END OF SECTION 90

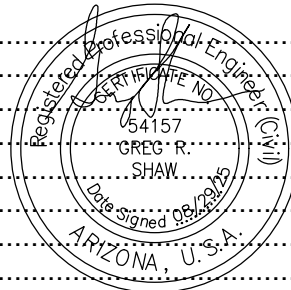
END OF GENERAL PROVISIONS

SECTION III-B

TECHNICAL SPECIAL PROVISION SPECIFICATIONS

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TECHNICAL SPECIAL PROVISION SPECIFICATIONS

1. TRAFFIC CONTROL AND REGULATIONS

All traffic and/or traffic control devices on this project shall be provided, maintained and/or controlled by the Contractor, as specified in the City of Phoenix Traffic Barricade Manual, latest edition, with revisions as shown below:

- a. The following shall be considered major streets:
 - Yuma Road;
 - MC 85;
 - Bullard Avenue;
 - Litchfield Road, and;
 - Goodyear Parkway
- b. Permission to restrict City streets, sidewalks and alleys (street closure permits) shall be requested as specified in the *Traffic Barricade Manual*, latest edition.
- c. Unless otherwise provided in Item 34, "Airport Safety and Security (M-003)", all traffic on this project shall be regulated as specified in the *Traffic Barricade Manual*, latest edition.
- d. No deviation to Item 34, "Airport Safety and Security (M-003)" will be allowed or implemented unless submitted to the City for review and approval one (1) week prior to the proposed work.
- e. Off-peak hours at Phoenix Goodyear Airport are from 10:00PM to 5:00AM for lane restrictions.
- f. No complete road closures are allowed.
- g. The Contractor shall submit for each construction phase, a Landside Traffic Control Plan containing traffic control drawings with barricade layouts to the City for approval. This submittal must be transmitted to the City a minimum of one (1) week prior to instituting the particular Traffic Control Plan.
- h. Any damage by the Contractor to major streets shall have full repairs performed the same day that the damage occurred at no cost to the City.

2. PLANS AND SPECIFICATIONS

The Contractor shall keep at least one (1) copy of the contract documents constantly accessible on the work site.

The City of Phoenix Supplements will govern over the MAG Standard Specifications and Details. In case of a discrepancy or conflict between these Contract Documents and the City of Phoenix Supplements or the MAG Standard Specifications and Details, the Plans will govern over both the City of Phoenix Supplements and MAG Standard Specifications and Details. Technical Special Provisions will govern over the City of Phoenix Supplements and the MAG Standard Specifications and Details.

The following is the precedence of the Contract Documents:

- a. Technical Special Provision Specifications
- b. Civil Technical Specifications
- c. Cited Standards for Materials and Testing
- d. Cited Federal Aviation Administration (FAA) Advisory Circulars
- e. General Provision Specifications
- f. Plans
- g. 2024 City of Phoenix Supplements to the 2023 Edition MAG Uniform Standard Specifications and Details for Public Works Construction
- h. MAG Uniform Standard Specifications and Details for Public Works Construction

Calculated dimensions will govern over scaled dimensions. 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, he shall immediately call upon the Engineer for his/her interpretation and decision, and such decision shall be final.

Electronic files (CAD files) are not a part of the contract documents. Information contained on CAD files may not be compatible with the coordinates, elevations, details, and dimensions shown on the Project Plans. The Contractor may be provided with CAD files; however, the Contractor shall survey and construct the project from the information shown on the Project Plans, and as specified in the Project Specifications and Contract Documents.

3. WATER

All water required for and in conjunction with the work to be performed shall be provided by the Contractor and at the Contractor's expense. The Contractor shall arrange for the installation of an appropriate meter and bear the cost of such installation and the cost of the water.

When the Contractor needs a temporary waterline to the staging area, he shall coordinate the temporary waterline installation with the City of Phoenix Aviation Department Inspection Staff. There shall be no separate pay item for the construction of temporary water lines. These costs shall be included in items for which direct payment is made.

Prior to the actual water line shut down, the Contractor shall follow the following sequence of events:

- a. Construct all new waterlines, except for connections to existing water lines.
- b. Test the new water line in accordance with MAG and the City of Phoenix Supplemental specifications.

- c. Demonstrate that all fittings and waterlines are on site available to connect the new waterline to the existing waterline.
- d. Notify all customers in writing who will be experience water service interruption.
- e. Notify the Fire Department of possible low pressures to firelines and satisfy Fire Department requirements.
- f. Complete the connection of new temporary waterline under this Contract, to existing, with minimum disruption to the waterline system.

4. SECURITY FENCES AND GATES

All existing security fences and gates affected by the work shall be maintained by the Contractor until final completion and acceptance of the work. Existing security fence and gates that interfere with construction operations shall not be relocated or dismantled until permission is obtained from the City of Phoenix Airside Operations, through the Engineer. The duration that the security fence or gate may be left relocated or dismantled shall be approved by the City of Phoenix.

The Contractor shall submit to the City, a Security Gate Access Plan for review prior to the work, and prior to relocation or removal of any security gates or fence. The Contractor shall restore all security fences and gates that are affected by the work, to their original or to a better condition.

5. POWER

All power for lighting, operation of Contractor's plant or equipment, or for any other use as may be required in the execution of the work to be performed under the provisions of these contract documents shall be provided by the Contractor at his/her expense. Subject to the approval of the City, he/she may be permitted to connect to existing facilities where available, but he/she shall meter and bear the cost of such power.

Should electrical power not be immediately available for the Contractor's field offices, batch plant or the engineer's field offices and testing laboratories, the Contractor shall provide a generator(s) until such electrical power is available.

6. OPERATIONAL SAFETY AND MARKING

This project is within the limits of the Phoenix Goodyear Airport Air Operations Area, and as such, strict safety and security requirements are in effect. The Contractor's attention is directed to the City of Phoenix, *Airport Construction Safety Manual* and the following FAA Advisory Circulars:

a. Federal Aviation Advisory Circulars.

- 1. Advisory Circular AC 150/5340-1M, "Standards for Airport Markings" which is incorporated into these Contract Documents by reference. The requirements of Section 5 of the Advisory Circular regarding marking of closed or hazardous areas shall also be adhered to.

2. Advisory Circular AC 150/5210-5D, "Painting, Marking, and Lighting of Vehicles Used on an Airport", which is incorporated into these contract documents by reference. All Contractor vehicles and equipment shall be provided with orange and white checkered flags during hours with sufficient daylight. Fully functional amber rotating beacons shall be provided during all hours of work, as described in Civil Technical Specification Item 34.

3. Advisory Circular AC 150/5370-2G, "Operational Safety on Airports During Construction", which is incorporated into these Contract Documents by reference. The Special Safety requirements during construction shall be strictly observed.

b. Portable Light Plants.

1. The height, placement and orientation of light plants used during night construction will be subject to the review and approval of the City of Phoenix Aviation Department. Special care must be made to light plant position, orientation and use in order to avoid impairing both aircraft movements and the Air Traffic Control Tower (ATCT) operations.

2. A minimum of seven (7) days prior to the start of night construction the Contractor shall submit a Construction Lighting Plan for review and approval by the Engineer. This lighting plan shall be updated and re-submitted for approval, as and when dictated by changes to the Plan during the progression of the work, or if a revised Plan is requested by the Engineer.

c. Contractor Operational Assistance.

1. The Contractor shall provide trained personnel with vehicles, to escort the Contractor employees, subcontractors, vendors, truckers and any other person who are required to perform work that allows them to have access to the secured areas of the Airport.

2. The Contractor provided Operational Assistance shall hold security badges and attend escort training/airfield drivers training that will be conducted by Airside Operations.

3. These Contractor Operational Assistance personnel shall be under the direction of the City of Phoenix Airside Operations.

d. Open Trenching Limitations.

1. Open storm drain trenches, electrical duct or conduit trenches, utility trenches or any other trench shall be limited to 500-feet accumulative in length at any time. Open trenches in the runway safety area (RSA) shall be properly and completely backfilled and compacted in sufficient time before the end of the work shift.

e. Availability of Water Trucks and Vacuum Sweepers.

1. Vacuum sweepers and highway 4M water trucks shall be available and in operating condition to control dust and remove foreign object debris seven (7) days per week and twenty-four (24) hours per day, including Holidays. A minimum of one (1) vacuum sweeper and one (1) 4M highway water trucks shall be operating continuously at all times the Contractor or any subcontractor is working on the project.

f. Paint Striping and Obliteration. Asbestos and lead based paint identification and/or remediation shall be performed by the City of Phoenix unless otherwise indicated by an authorized City of Phoenix representative.

Prior to starting Work:

1. Paint marking trucks and obliteration by water blasting shall be on call and available to respond to the project site within twelve (12) hours.
2. The Contractor shall fabricate aluminum stencils/templates for all surface painted numbers and letters. Upon project completion, the Contractor shall deliver to the City of Phoenix, all stencils/templates for surface painted numbers and letters. The gauge of the aluminum stencil/template shall match the gauge of the City's existing stencils/templates.

g. Measurement and Payment.

1. Operational Safety and Marking shall not be measured for payment under this Special Provision. All costs in relation herewith will be considered incidental to the item of work to which it pertains.

7. RECORDS

The City of Phoenix, ADOT, the FAA, the Comptroller General of the United States, or any of their authorized representatives, shall be allowed access to any books, documents, papers, and records of the Contractor which are directly pertinent to the Airport Improvement Program project for the purpose of making audit, examination, excerpts, and transcriptions for a period of three (3) years following completion of the work.

8. NOT USED

9. SHOP DRAWINGS AND SUBMITTALS

The Contractor shall submit all submittals including shop drawings, working drawings or supplementary drawings to the Engineer for review for general conformance in accordance with MAG 105.2 and as modified herein. Contractor submittals shall be uploaded to the City's Oracle® Unifier system as necessary in PDF format. Each submittal shall be numbered sequentially and shall be submitted as to cause no delay in the work.

A partial list of submittals has been provided below, and it is intended to provide the Contractor with the minimum of required submittals. This list may not be complete, and it may be revised from time to time as the project progresses. Additional submittals may be required throughout the duration of the project at the discretion of the Engineer.

The date when the Contractor provides the submittal(s) to the Engineer shall be included in the Contractor's schedule using a distinct schedule activity ID number for each submittal. All submittals shall have assigned due dates. Due dates shall correspond with the approved Critical Path Method (CPM) schedule start dates for related activities allowing a minimum of fifteen (15) calendar days, or otherwise specified in the Technical Specifications, for the Engineer's review as well as adequate time for fabrication and delivery of the material. The Engineer and the City of Phoenix shall not be held responsible for late or inadequate submittals provided by the Contractor. Failure to submit by the submittal date may result in withholding of payment either in part or in full until the submittals are received. Materials shall not be incorporated into the work without the submittal reviewed, or the material certification reviewed by the City of Phoenix Materials Laboratory.

Submittal Number	Submittal Description
1.	Dust control plan (Civil Technical Specification Item C-102).*
2.	Preliminary CPM Contractor's construction schedule.
3.	A schedule of values.
4.	Revisions to the critical path method construction schedule and monthly report.
5.	A detailed lighting plan for night work (Technical Special Provision Specification Item 34) *
6.	Contractor's emergency names and phone number list (Special Provision Specification Item 34). *
7.	Request for taxiway closing, 72-hours advance written notice (Special Provision Specification Item 34).
8.	A detailed work plan for each phase and sub-phase of construction (Special Provision Specification Item 34).
9.	An airside barricade plan and traffic control plan (Special Provision Specification Item 34).
10.	A security badge control plan (Special Provision Specification Item 34).*
11.	A list designating those portions of the work to be performed by subcontractor's and the Contractor's own forces (City of Phoenix Requirement).
12.	Video tape and written report of the conditions of existing facilities, documenting the results of the inspection performed prior to the start of the work (Special Provision Specification 0).
13.	A list of subcontractors and material suppliers with an experience statement (City of Phoenix Requirement).
14.	Written safety and security program for the work (City of Phoenix Requirement).
15.	Copy of all executed subcontracts, including material suppliers (to be submitted before any subcontractor or material supplier begins work).
16.	A list of proposed construction equipment with specification details for the following: the concrete paver(s) including cure application equipment; structural concrete vibration equipment, the asphaltic concrete paver, compaction equipment, and the concrete batch plants (FAA Requirement).
17.	Certification from the Contractor's registered Land Surveyor or professional Engineer that the primary control established is acceptable and adequate to allow the Contractor's construction staking to meet the accuracy requirements of the specifications. (Special Provision Specification 30).
18.	Duplicate original certified payroll reports and statement of compliance, with sworn affidavits from the Contractor (Special Provision Specification, and to be submitted weekly).
19.	Three (3) week look ahead project schedule at weekly construction meetings (Special Provision Specifications).
20.	A landside barricade plan and traffic control plan for each phase of construction (Special Provision Specifications).
21.	Security gate access plan (Special Provision Specifications).
22.	Certified test results for any P-209 crushed aggregate base course (MAG Section 702).
23.	Contractor's Quality Control Plan, to be submitted five (5) business days prior to the pre-construction conference (Civil Technical Specification Item C-100).
24.	Contractor's quality control records, including daily inspection reports and daily test reports, to be submitted daily (Civil Technical Specification Item C-100).

25. Temporary fencing plan for Contractor's staging area (Civil Technical Specification Item P-101).
26. Controlled low strength material (CLSM) mix design with test data (Civil Technical Specification P-153).
27. Storm water pollution prevention plan, including certification of compliance Form* (Civil Technical Specification Item C-102).
28. Storm water pollution prevention plan notice of intent.* (Civil Technical Specification Item C-102).
29. Storm water pollution prevention plan inspection and maintenance reports, monthly submission required, or when precipitation exceeds 0.5-inches (Civil Technical Specification Item C-102).
30. Storm water pollution prevention plan notice of termination (Civil Technical Specification Item C-102).
31. Material gradation, fractured face(s), percentage of wear, Atterberg Limits, and sodium sulfate soundness loss for crushed aggregate base course (Civil Technical Specification Items P-209 and P-219).
32. Structural Portland cement concrete mix design(s) (Civil Technical Specification Item P-610).
33. A letter of certification for any admixture used in structural Portland cement concrete (Civil Technical Specification Item P-610).
34. Manufacturer's certified test reports for all paint shipped to the project (Civil Technical Specification Item P-620).
35. A letter of compliance for the rubber gasket reinforced concrete D-load pipe (Civil Technical Specification Item D-701).
36. Gradation and physical requirements for the pipe bedding (Civil Technical Specification Item D-701).
37. Shop drawings for junction structures, manholes and catch basins (Civil Technical Specification Item D-751).
38. MAG concrete mix design(s) (MAG Standard Specifications).
39. A new copy of the sealed and certified weighing and metering devices used for the purpose of proportioning Portland cement, sealed and certified as to accuracy and tolerance prescribed by the weights and measures division of the state of Arizona.
40. Shop drawings and material lists of manufacturers' brochures containing complete dimensional and performance characteristics, installation and operation instructions, etc. for each item; the FAA specification number, the manufacturers' name, the manufacturers' catalog number; and the size, type and/or rating of each item used on the project.
41. Manufacturers' statement of warranty for each item used on the project.
42. Materials list shall be submitted listing each specification paragraph number and stating whether the materials proposed are as specified or are substitutions.
43. Contractor's affidavit regarding settlement of claims (Project Close out Requirement).
44. Submit a disadvantaged business enterprise (DBE) utilization percent obtained for the project (Project Close out Requirement).
45. Original affidavit acknowledging that all subcontractors, material suppliers, payrolls, bills for materials and equipment, and other indebtedness connected with the work have been paid or otherwise satisfied (Project Close out Requirement).
46. A written consent of the surety to final payment (Project Close out Requirement).

47. Record drawings with a written certification that the drawings are accurate and complete, due at substantial completion (Project Close out Requirement).
48. An Original, with Notary Signature, Full and Final Release and Waiver on Liens from the Contractor and for each subcontractor and material supplier that documents that they have been paid in full (Project Close out Requirement).
49. A lien release documenting that all subcontractors and material suppliers have been paid for the previous month's work (Project Close out Requirement).
50. Certificate of final completion (Project Close out Requirement)
51. Written warranty, due at final completion (Project Close out Requirement).
52. Compact disk containing all the information contained in the submittals. The information shall be submitted in PDF format. Cut sheets, shop drawings, and pages from suppliers' catalogs must also be furnished in electronic format as indicated above (Special Provision Specification 9).

* Indicates that the submittal or shop drawing is due at the pre-construction conference.

The Contractor shall submit a detailed listing of all submittals (e.g. mix designs, material certifications) and shop drawings as required by the Civil and Electrical Technical Specifications and elsewhere in these contract documents. The listing can be developed in a spreadsheet format and shall include:

- a. Specification item number
- b. Item description
- c. Description of submittal
- d. Specification paragraph requiring submittal, and
- e. Scheduled date of submittal to be returned to Contractor

The Contractor shall certify each submittal and shop drawing by providing an original signed and dated letter to the City, that he has reviewed and approved the submittal and that it conforms to the requirements of the contract documents.

If this original certification is not included, the submittal and/or shop drawing will be returned without any action by the City. At the time of each submittal, the Contractor shall define and delineate in writing on the certification, any deviations from the contract documents.

The City's review will be only for general conformance with the design concept of the work and for compliance with the information contained in the contract documents. The review of a specified item, as such, will not indicate review of the assembly in which the item functions. Review by the City will not relieve the Contractor from responsibility for any errors or omissions in the submittal or shop drawings, nor from his responsibility for complying with the contract documents.

After all submittals and shop drawings are reviewed, the Contractor shall furnish a compact disk read only memory (CD ROM) containing all the information contained in the submittal. The information shall be submitted in Acrobat Reader PDF format. Cut sheets, shop drawings, and pages from suppliers' catalogs must also be furnished in electronic format as indicated above, or otherwise approved by the City.

10. PROTECTION OF EXISTING FACILITIES

Prior to the start of the construction, periodically as requested, and at the completion of the project, a representative of the Aviation Department and the Contractor's authorized representative will inspect the excavation and embankment areas, staging area, haul roads and job site to evaluate the condition of existing facilities. The City may videotape these inspections. The Contractor will be held responsible for any damage to existing facilities in accordance with MAG Uniform Standard Specifications Section 107.9. The Quality Control Program Administrator and the Contractor shall video tape and inspect the condition of existing facilities. The video tape and the written report shall be submitted to the Engineer, documenting the results of the inspection performed prior to the start of the work.

There may be existing ground monitoring wells throughout the Airport owned by the City of Phoenix and Arizona Department of Environmental Quality (ADEQ). The Contractor shall provide lighted barricades around the existing ground monitoring wells that are within the construction limits, prior to the start of construction.

Existing ground monitoring wells shall be protected in-place by the Contractor. The environmental division of the Aviation Department will complete the grade adjustments to the ground monitoring wells as necessary, unless noted otherwise on plans. However, the cost of repairs due to damage caused by the Contractor shall be borne solely by the Contractor. The Contractor shall coordinate all adjustments or repairs to the ground monitoring wells with the Environmental Division.

11. PROJECT FIELD OFFICES

During the performance of this Contract, the Contractor shall maintain suitable offices, laboratories and testing facilities at the Airport project site (specific site is shown on the plans) that shall be the headquarters of his representative authorized to receive drawings, instructions or other communication or articles.

The Contractor shall be responsible for maintaining the offices and all facilities and equipment therein in good working condition for the full duration of the project. All utility costs shall be the responsibility of the Contractor as well as any fees for permits, cleaning services, sanitary, water, electrical and gas hookups, installation charges, etc.

Any communication given to the said representative or delivered at Contractor's office at the site of the work in his absence shall be deemed to have been delivered to the Contractor. Copies of the drawings, specifications and other Contract Documents shall be kept at Contractor's office at the site of the work and available for use at all times.

12. TELEPHONE SERVICE

Contractor shall make all necessary arrangements with the telephone utility for telephones in his offices at the site and separate telephones in the office of the Engineer. The Contractor shall pay all monthly charges therefore, including long-distance calls from the office of the Engineer, not to exceed \$250.00 per month.

13. SANITARY FACILITIES

The Contractor shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and others performing work or furnishing services on the project. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one (1) or more toilets will be furnished at each secured site, as required by the Arizona State Department of Health Services. The Contractor shall enforce the use of such sanitary facilities by all personnel at the site.

For construction phases or sub-phases where the work hours are limited and the area is to be re-opened at the end of the work shift, the Contractor shall provide mobile chemically treated facilities to be mobilized and demobilized to the work area daily.

14. PARKING

The Contractor shall provide and maintain suitable off-site parking areas outside of the Air Operations Area for the use of all construction workers and others performing work or furnishing services in connection with the project, as required to avoid any need for parking personal vehicles where they may interfere with public traffic, aircraft and Owner's operations, or construction activities. A preliminary parking location is shown in the plans; however, the Contractor's parking area will be determined in the pre-construction conference. The Contractor shall restore all parking areas to original (pre-construction) condition, including fence, gates and ground surfaces following all construction activities.

15. CONSTRUCTION SCHEDULE

Refer to City of Phoenix specifications for project schedule requirements. There will be no work (with exception to vacuum sweeping for the cleanup of foreign object debris) as described in the following:

- a. The night shift on New Year's Eve, all day on New Year's Day, the night shift on New Year's Day
- b. The night shift prior to Labor Day, all day on Labor Day, the night shift on Labor Day
- c. The night shift prior to Memorial Day, all day on Memorial Day, the night shift on Memorial Day
- d. The night shift prior to the 4th of July, all day on the 4th of July, the night shift on the 4th of July
- e. The night shift prior to Thanksgiving Day, all day on Thanksgiving Day, the night shift on Thanksgiving Day, the Sunday day shift and the Sunday night shift following Thanksgiving
- f. The night shift on Christmas Eve, all day on Christmas day, the night shift on Christmas day
- g. Any dates described in the current City of Phoenix Aviation Department's moratorium calendar.

The Contractor shall develop his schedule, plan his work, and provide sufficient manpower materials and equipment to complete all work within the allotted contract time utilizing five (5) day work weeks and multiple shift operations as needed.

16. DELAYS AND EXTENSIONS OF TIME

Delete MAG Section 110 and substitute the following:

- a. Notice of Claim for Additional Time.** Claims for additional time must be made by the Contractor per Article 6. Notice of any Contractor claims of time extension entitlement due to extra work must be included in the Contractors change order request regarding the extra work. Failure to provide the notice required by this section shall constitute a waiver of any entitlement the Contractor may otherwise have. Notices shall include: (1) the nature of the delay; (2) the critical path activities being affected; (3) the probably effect of the delay on progress of the work; (4) a description of efforts the Contractor intends to make to mitigate the delay, and; (5) a cost estimate. If the notice includes adverse weather delays, the notice shall also include data substantiating the adverse weather.
- b. Notice of Claim for Additional Cost.** If the Contractor wishes to make a claim for an increase in the contract sum, written notice shall be given before proceeding to execute the work. The written notice shall be given to the City within five (5) calendar days after the occurrence of the event giving rise to the claim. Prior notice is not required for claims relating to an emergency endangering life or property. The Contractor shall provide notice of claims relating to emergencies within five (5) days after the occurrence of the emergency. Failure to strictly comply with this notice requirement shall constitute waiver of such claims.
- c. Out-of-Sequence Work.** The Contractor and Owner contemplate that changes in the Contractor's schedule and the performance of out-of-sequence work may be necessary for the beneficial and timely completion of the project, safety of the flying public or convenience of the Owner. The Contractor expressly waives any claim for additional costs resulting from out-of-sequence work beneficial to the overall project.
- d. Continuing Contract Performance.** Pending final resolution of a claim, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract other than amounts in dispute.
- e. Claim Documentation.** Within thirty (30) calendar days after the Contractor submits a notice of claim, the Contractor shall submit a "Claim," which shall include the following documentation:

 - 1. The date of the occurrence and the nature and circumstances of the issue for which the notice of claim was given.
 - 2. The identity of any documents and the substance of any oral communication related to the issue.
 - 3. The basis for an assertion that the work required is a change from the original Contractor work or schedule.
 - 4. The identity of particular elements of contract performance for which a change in compensation and/or time may be sought including:

5. A previously submitted project schedule demonstrating that any affected activities were identified as on the project's critical path or were made critical by the delay.
 - a) Pay item(s) that have been or may be affected by the issue and any adjustments to unit price(s) that are required;
 - b) Labor and/or materials that will be added, deleted or wasted by the problem and what equipment will be idled or required.
 - c) Delay and disruption in the manner and sequence of performance that has been or will be required.
 - d) Adjustments to delivery schedule(s), staging, and contract time due to the dispute and
 - e) An estimate of time within which the Owner must respond to the notice to minimize cost, delay, or disruption of issue.

6. Any other items or information germane to the dispute.

7. "I, _____, being the _____ (must be an officer) of _____ (Contractor), declare under penalty of perjury under the laws of the State of Arizona, and do personally certify and attest that: I have thoroughly reviewed the attached Claim for additional compensation and/or extension of time, and know it's contents, and said claim is made in good faith; the supporting data is truthful and accurate; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the City of Phoenix is liable; and, further, that I am familiar with Federal Acquisition Regulation (FAR) clause 52.214-27, found in 48 CFR Part 52; and further know and understand that submission or certification of a false claim may lead to fines, imprisonment, and/or other severe legal consequences."

By: _____

Title: _____

Date: _____

The Contractor's written certification, under oath: If any subcontractor or any lower tier subcontractor wishes to make a Claim, the subcontractor shall also provide the certification (in addition to the General Contractor).

- f. **Claims for Consequential Damages.** The Contractor waives claims against the Owner for consequential damages arising out of or relating to this contract. This waiver includes the Contractor's principal office expenses including the compensation of personnel stationed there, financing losses, business and reputation and lost profits.
- g. **Claim Review.** Claims shall be submitted to the Engineer, who will review the Claim and provide a recommendation to the Owner. The Engineer's recommendation shall not be binding on the Owner. The Owner may meet with the Contractor review the claim.
- h. **Owner's Audit Rights.** The submission of a Claim by the Contractor shall entitle the

Owner to audit all Contractor records and documents relating to the project, including but not limited to the Contractor's bid documents, job cost records and ledgers, payrolls, schedules, communications with its subcontractor and material suppliers and subcontract agreements. The Contractor's failure to timely provide these documents shall constitute a material breach of the Contract.

17. COORDINATION BETWEEN CONTRACTORS

There may be work on airport projects by other contractors that could affect this project. The Contractor on this project shall work with airport personnel to coordinate his activities and access to the project.

18. SEQUENCE OF CONSTRUCTION

The following scheduling requirements are being provided to serve as supplemental information in preparation of the sequencing of construction. It is not the intent of these Special Provisions or the construction plans to dictate to the Contractor his/her method of construction for this project. The Contractor shall review these specifications and submit to the Engineer prior to construction, his/her construction plan on how he/she will meet the project schedule for review.

a. Limitations of Operations. The Contractor shall conduct all his operations in such a manner so as to maintain a smooth, safe, uninterrupted flow of aircraft and vehicular traffic adjacent to the work site. He shall conduct all his earthwork construction in such a manner so as to minimize any potential differential settlement between the edges of existing pavements. Unless noted otherwise on the plans, no work shall be performed within active runway or taxiway safety areas. The Contractor shall remove all equipment from the Runway and Taxiway safety areas including the infields prior to re-opening the Taxiway.

Limits of the various phases of work shall be clearly delineated with barricades, barricade lights, mandatory signs, taxiway signs (temporary and permanent) and paint markings as shown on the plans and specified herein, in order to deter aircraft and vehicles from entering the construction areas. The Contractor shall work closely with Airport Operations personnel, City of Phoenix Inspectors and the Engineer to ensure that the work is accomplished with minimal interference with aircraft movements.

Aircraft always have the "right-of-way". When the Contractor is working adjacent to an active apron, runway or taxiway and an aircraft approaches the work area, the Contractor may be required to "pull back" his operations, i.e., move workers, materials and equipment away from the taxiway or runway, outside of object free area, or as directed by City of Phoenix Operations or Inspection personnel.

The Contractor shall maintain all active runway and taxiway lighting systems at all times, unless otherwise specified. When temporary bypasses of active circuits are to be constructed in order to work on portions of the circuits, the circuits shall be de-energized and re-energized in conformance with the procedures specified by the City of Phoenix Aviation Department.

b. Opening Inspections. When the Contractor requests in writing to open an individual phase of work, or areas that are scheduled to be reopened to aircraft traffic, the Engineer will conduct an observation of the construction area before opening to aircraft traffic. The

conditions which observations will consider potentially hazardous and which must be corrected prior to reopening the taxiway prior to the end of a work shift (day shift or night shift as the case may be) include but are not limited to, the following:

1. Trenches, holes, or excavations on, or adjacent to any open taxiway, runway, apron or related safety area.
2. Un-marked or un-lighted holes, trenches or excavations near any runway, apron, taxiway, or related safety area.
3. Mounds or piles of earth, temporary stockpiles, construction materials, temporary structures, or other objects on or in the vicinity of any open runway, apron, taxiway object free area, or in a related safety, approach or departure area.
4. Vehicles or equipment (whether operating or idle) on any open apron, taxiway, or in any related safety, approach or departure area.
5. Vehicles, equipment, excavations, stockpiles, or other materials which could impinge upon Navigational Aid (NAVAID) critical areas and degrade or otherwise interfere with electronic signals from radios or electronic NAVAIDs or interfere with visual NAVAID facilities.
6. Objects (whether marked/flagged or not) or activities anywhere on or in the vicinity of the airport which could be distracting, confusing, or alarming to pilots during aircraft operations.
7. Un-flagged or un-lighted low visibility vehicles and equipment including cranes in the vicinity of an active runway, taxiway or apron or near any approach or departure surface.
8. Misleading or malfunctioning obstruction lights or barricade lights.
9. Inadequate approach/departure surfaces (needed to assure adequate landing/takeoff clearance over obstructions or work or storage areas).
10. Inadequate, confusing, or misleading (to user pilots) marking/lighting of any open apron, runway, taxiway, or in any related safety, approach or departure area.
11. Water, dirt, debris, or other transient accumulation that temporarily obscures pavement marking, pavement edges, or derogates the visibility of runway/taxiways marking, lighting or of construction and maintenance areas. There is zero tolerance for foreign object debris (FOD).
12. Inadequate or improper methods of marking, barricading, or lighting of temporarily closed portions of airport operation areas including unlighted or missing construction and barricade lights.
13. Construction materials, trash or other materials with FOD potential, whether on aprons, runways, taxiways, service road, public streets or related safety areas. Inspectors will be watchful for debris that can be ingested into aircraft engines creating a potential for FOD. Such items include rock, aggregate, soil, loose polyethylene and other light materials

capable of being blown onto aircraft movement areas by wind.

14. Construction/maintenance activities or materials that could hamper airport rescue and fire-fighting (ARFF) vehicle access from ARFF stations to all parts of the runway/taxiway system, runway approach and departure areas, or aircraft parking locations.
15. The time allowances for all work is inclusive of the Contractor moving onto the site, performing work activities, performing all clean-up, having the work area and haul routes inspected and approved by the Engineer, and moving off the site. The Contractor shall provide adequate lighting for the needs of the inspection personnel.
16. Any Aircraft Operating Areas (AOA), open apron, runway, taxiway, or in any related safety, approach or departure area that does not pass inspection must remain closed until such time cleanup is performed and approved.

c. Construction Phasing. Typical work to be done during each construction phase is given as supplemental information and is not intended to be a complete listing of all work to be accomplished. All work called for on the plans and all items necessary to construct a complete, operational section of a concrete taxiway within the limits of the work area shall be completed in the individual phase and/or sub-phases, prior to proceeding with the next phase or sub-phase.

19. ARCHAEOLOGICAL FEATURES

Although the City of Phoenix Aviation Department has made every effort prior to construction to identify all cultural resources in the project area, previously unidentified archaeological materials may be found during the construction of this project.

If human remains are encountered during any phase of the construction, the Contractor shall suspend all work in the vicinity of the find and shall take steps to secure the protection of the remains. The Archaeological Consultant and the City of Phoenix Archaeologist shall be contacted immediately to determine an appropriate course of action. In the event of suspension of work pursuant to this Special Provision, the Contractor may be entitled to an adjustment of contract time.

If satisfactory fulfillment of the Contract involves alterations to the contract time that affect the Contractor's completion time, the Contractor may request a supplemental agreement that extends that Contract time. The supplemental agreement shall be in the form of a Request for Extension of Contract time and shall include the Contractor's revised schedule and all other pertinent data. The request shall show why an increase of Contract time is warranted.

An extension of contract time will not be considered unless the work affected by the Archaeological investigation and suspension of a construction activity becomes a critical item on the Contractor's CPM schedule.

20. RED OBSTRUCTION LIGHTS

Red obstruction lights shall be 100-watt fixtures, with 360-degree beam spread, and in compliance with the Federal Aviation Administration (FAA) specification found in Advisory Circular AC150/5345-43J "Specification for Obstruction Lighting Equipment", L-810. The

Contractor shall provide a minimum of two (2) red obstruction lights each, for all stationary cranes, batch plants, pug mills or other equipment erected on the Airport, and erected at the other sites that are near the Airport. The red obstruction lights shall be supplemented with additional red obstruction lights as directed by the City of Phoenix Airside Operations or the Engineer. All movable cranes shall be provided with red obstruction lights at their highest point, and the boom shall be lowered during the hours of darkness or periods of low visibility.

The City of Phoenix Aviation Department will issue local Notice to Airmen (NOTAM) for obstruction lighting and the Contractor shall notify the Engineer a minimum of five (5) working days in advance, if any relocation of the obstruction lights is necessary. The Contractor shall not relocate any red obstruction lights(s) without prior approval from the Engineer. All such equipment is to be erected and removed from the Air Operations Area (AOA) during the off peak hours.

21. YELLOW WARNING LIGHTS FOR VEHICLES

The Contractor will provide flashing yellow warning lights at all times during construction, including periods of low visibility, as well as orange and white checkered flags during daylight, for all vehicles and all mobile construction equipment on the construction site, per Advisory Circular 150/5210-5D, "Painting, Marking, and Lighting of Vehicles Used on an Airport" as included in the Appendix. Yellow warning lights and orange and white checkered flags must be displayed in a prominent visible position and kept operational at all times. The Contractor must rectify the condition of any lights or flags not found to be acceptable to the City of Phoenix Operations immediately. If not rectified within six (6) hours, or a lesser time, at the discretion of the City of Phoenix, or if a clearly unsafe condition exists, work may be suspended at no cost to the City of Phoenix, until the situation is addressed.

All construction motor vehicles must display adequate company identification logos on both sides of the vehicle and at all times while within the AOA. Failure to comply will result in the issuing of a Notice of Violation (NOV) and the appropriate fine.

There will be no separate pay item for yellow warning lights, checkered flags or company identification logos. The cost will be included in other bid items. Refer to Civil Technical Specification Item 34, "Airport Safety and Security (M-003)" for additional requirements.

22. AIRCRAFT TRAFFIC REGULATIONS

Aircraft traffic will continue to use existing runways, aprons, and taxiways of the airport during the time that work under this contract is being performed. The Contractor shall at all times so conduct his work as to create no hindrance, hazard, or obstacle to aircraft using the airport and must, at all times, conduct the work in conformance with requirements of the Airport Director and FAA Control Tower or their authorized representative.

Any proposed haul routes across aircraft movement areas will require controlled crossings with flagmen at each side of the controlled crossing, in accordance with Aviation Department details and requirements. Nighttime crossings shall be equipped with light plants on both sides of the crossing. The Contractor shall provide traffic control, crossing guards, barricades, and temporary fencing plan(s) to the Engineer for approval five (5) days prior to instituting operations in the Air Operations Area.

When absolutely essential, in order to permit construction under this contract, taxiways may be closed at the Aviation Department's discretion to aircraft operations upon advance written application by the Contractor to the Engineer. The Contractor will schedule and organize his work so that a minimum of crossings or crossings of taxiways will be required during the performance of the entire project.

23. DISPOSAL OF SURPLUS MATERIAL WHICH DOES NOT CONTAIN ASBESTOS

No measurement or direct payment will be made for the hauling and disposal of surplus and/or waste material; the cost shall be incidental to the cost of the project. All surplus and/or waste material shall be disposed of by Contractor at and off-site location such as a landfill, subject to the following conditions:

- a. If the City landfills are used, the Contractor shall pay the normal dumping fee. The Estes Landfill will not be available to dispose of surplus materials.
- b. If private property within the City limits is used, the Contractor shall obtain written permission from the property Owner and deliver a copy of this Agreement to the Engineer prior to any hauling or dumping. All disposal and grading shall be in strict conformance with the City of Phoenix Grading and Drainage Ordinance. The Contractor shall obtain and pay for the necessary permit(s).
- c. If the surplus material is disposed of outside the City limits, the Contractor shall comply with all applicable laws/ordinances of the agency concerned and be responsible for all cost incurred.

24. HAUL PERMIT

Obtaining the haul permit and the approval by Street Transportation does not release the Contractor from strict compliance with MAG Subsection 108.5, Limitation of Operations. On any project, when the quantity of fill or excavation to be hauled exceeds 10,000 cubic yards, or when the duration of the haul is for more than twenty (20) working days, the Contractor shall:

- a. Obtain and pay for a written haul permit from the Development Services Department.
- b. Obtain approval of the proposed haul route, number of trucks, etc., by the Street Transportation Department.

25. UNDERGROUND FACILITIES

The Contractor will make whatever investigation it deems necessary to verify the location of underground utility facilities, by providing a private utility locating company to verify the location of all on-site utilities prior to construction. The utility locator company shall mark all utilities that may or may not conflict with construction. The Contractor shall field survey these utilities and plot this information on the Record Drawings that the Contractor will be preparing. If such facilities are not in the location shown in the drawings, then (regardless of whether this is discovered prior to or during construction) the Contractor's remedies, if any, pursuant to Article 6.3, Chapter 2, Title 40, A.R.S. (A.R.S. § 40-360.21 through A.R.S. § 40-360.32, "Underground Facilities"), shall be the Contractor's sole remedy for extra work, delays, and disruption of the job, or any other claim based on the location of utility facilities. Locations of utility facilities are

shown on drawings and were furnished by the City, are to be regarded as preliminary information only, subject to further investigation by the Contractor. The City does not warrant the accuracy of these locations, and the Contractor, by entering into this Contract, expressly waives and disclaims any claim or action against the City under any theory for damage resulting from location of utility facilities.

The Contractor shall be responsible for obtaining all utility location information, and for performing all requirements as prescribed in A.R.S. § 40-360.21 through A.R.S. § 40-360.29, for all underground facilities, including those that have been installed on the current project, until the project is accepted by the City.

At least two (2) working days prior to commencing any excavation, the Contractor shall contact Arizona 811, the Blue Stake Center, between the hours of 6:00 a.m. and 5:00 p.m., Monday through Friday, for information relative to the location of buried utilities that are located on landside. The number to be called is as follows: Maricopa County: (602) 659-7500.

Several utility owners, including the City of Phoenix, the Federal Aviation Administration, and others have utilities in the proposed work area. These utilities shall be located and potholed by the Contractor prior to starting construction. The Contractor is advised that several underground environmental monitoring facilities exist within the project work limits. These facilities are to be protected by the Contractor and left in an undisturbed condition, unless noted on plans. Any inadvertent damage must be reported immediately to the Aviation Department Environmental Section. The Contractor will be responsible for returning any damaged environmental monitoring facility to a pre-construction condition. Refer to Civil Technical Specification Item 32 for method of measurement and basis of payment.

26. CHANGE ORDER REQUEST MARKUPS

The Contractor shall conform to the following markups for change order work, or for the allowance work that is self-performed by the Contractor and/or performed by a subcontractor. The Contractor shall also utilize the Change Order Request Summary Worksheet. The Contractor shall submit all required backup and supplemental information, calculations, invoices, etc., that are required to justify and support all Contractor and subcontractor costs.

- a. General Contractor Self-Performed Work and Subcontractor Work Markups.** For overhead and profit, the actual or approved costs for equipment, material, and labor shall be marked up by twelve percent (12%) for profit and overhead.
- b. General Contractor Markups of Subcontractor Work and Subcontractor Markups of Lower Tier Subcontractors.** The Contractor shall be allowed to markup actual or approved subcontractor costs for equipment, material, and labor (excluding subcontractor overhead and profit) by seven and one half percent (7.5%). Subcontractors shall be allowed to markup actual or approved lower tier subcontractor costs for equipment, material, and labor (excluding lower tier subcontractor overhead and profit) by seven and one half percent (7.5%).
- c. Bond.** No markups for bond will be permitted until the contract monetary amount has been exceeded for which the bond has been issued. No bond markups will be permitted for work performed by subcontractors and lower tier subcontractors.

- d. **Insurance.** The Contractor shall be allowed to markup the cost for change order work plus bond costs for property damage/public liability insurance, utilizing the same percentage used on the initial contract. Verification, from insurance carriers, of this percentage shall be submitted with the initial change order request.
- e. **Sales Tax.** The Contractor shall be allowed to markup the cost for change order work plus bond and insurance costs by the current, approved sales tax multiplier.

27. EXTENSIONS OF CONTRACT TIME

MAG General Condition Specification 108.7, DETERMINATION AND EXTENSION OF CONTRACT TIME, is deleted in its entirety and substituted with the following:

- a. **Weather Delay.** “Extensions of time due to adverse weather conditions not reasonably anticipated will be granted only if such inclement weather prevents the execution of critical path items of work at the time of the inclement weather. Extensions of time for weather delays will be considered only if such actual monthly inclement weather exceeds the monthly average for that month as shown in the Table below. The extension would be considered on the day after the rainfall exceeds the monthly average listed in the Table. The Contractor shall base his CPM Schedule using at least three (3) weather delay days per month between January and March, and at least one (1) weather delay day per month between April and December. These weather days will not be considered for an extension of contract time.

The Contractor shall request an extension of time in writing within forty-eight (48) hours after the event that caused the delay. This written notification is required regardless if the request is based on inclement weather or based on other factors. No extension of time will granted if the written request is not received within forty-eight (48) hours.

TABLE – City of Phoenix Average Monthly Precipitation Data.

<i>Month</i>	<i>Average Monthly Precipitation</i>
January	0.94-inches
February	1.05-inches
March	1.13-inches
April	0.32-inches
May	0.11-inches
June	0.05-inches
July	0.88-inches
August	0.98-inches
September	0.75-inches
October	0.65-inches
November	0.67-inches
December	0.94-inches

- b. **Notice of Claim for Additional Time.** If the Contractor wishes to make a claim for an increase in the Contract Time, written notice shall be given. The notice shall be made in writing to the Engineer within five (5) days of the delay causing occurrence except for notice of adverse weather caused delays, which shall be made within forty-eight (48) hours. The notice shall set forth (a) the cause of the delay, (b) a description of the portion or portions of Work affected by the delay, (c) the specific number of days of delay for which an extension

of time is requested, (d) all actions the Contractor is taking to mitigate the delay (e) any actions the Owner or others could take to mitigate the delay (f) the latest schedule showing the delayed activity's relationship to the project's critical path and (g) all details pertaining thereto. In the case of a continuing delay, the Contractor shall weekly submit an updated notice. Failure to give notice of a claim for extension of time in strict compliance with this provision shall constitute a waiver of such claim.

- c. **Critical Path.** No extension of time shall be granted to the Contractor for a delay caused by the Owner, Engineer, other contractors or any other party, or other causes beyond the Contractor's control, unless the delay affects the critical path of the Project as defined on a critical path method schedule or monthly update provided to the Owner before the delaying occurrence and then only to the extent that the delay affects the critical path. If the delay event forces a previously non-critical path activity onto the project critical path, this change must be shown on the next monthly update and expressly identified in the narrative report. Failure to so identify critical path changes shall be deemed to waive the Contractor's right to recover any costs associated with the delay event's impact on the activity. Delays not identified on the Contractor's next monthly update shall be waived. No extension of time shall be granted to the Contractor to the extent that, notwithstanding the existence of any such circumstance beyond the Contractor's control, delay would have resulted in any event due to a concurrent unexcused delay.
- d. **Changes in the Work.** For changes in the work that significantly affect the time and progress of the work, any time extensions shall be requested no later than when the change in the work is requested. Any change order negotiated and signed by the Contractor and Owner that does not include an express time extension shall be deemed conclusive evidence that no time extensions related to the changed work is warranted and the Contractor shall forever waive its right to claim entitlement to such a time extension.

Change order requests shall include all costs necessary to perform the extra work within the contract period unless a time extension is granted. This shall include but not be limited to necessary acceleration costs. The Contractor may reserve the right to request a time extension at a later date. However, if the Contractor elects to do so, the City will withhold ten (10) percent of the change order amount until the Contractor submits a critical path method schedule analysis that complies with all Contract requirements and identifies the resultant delay. If the Contractor fails to timely do so, the Owner may use the withheld amount to perform a schedule analysis to identify the resulting delay.

- e. **Overhead Costs During Time Extensions.** The Contractor and Owner contemplate that the entire contract period may be reasonably necessary to complete this Contract's scope of work. It is the contemplation of the parties that any home office or field overhead or supervision costs necessary to perform work during the entire contract period is incorporated into the Contractor's overall Bid. The Contractor shall not be entitled to recover home office or field overhead and supervision costs during the performance period, even if the Contractor originally planned to complete the work before the contract period expired. Acceptance by the Owner of schedules showing early completion by the Contractor shall not constitute a waiver of this provision.

28. STOCKPILED MATERIAL

Stockpiled materials shall not be allowed in the air operations area, unless permitted by the City of Phoenix. Material shall not be stored near aircraft turning areas or movement areas.

The maximum stockpile height, if permitted by the City of Phoenix, shall not exceed 3-feet above the adjacent pavement elevation. Therefore, the Contractor shall prepare his bid on the basis of hauling the material off-site of the Airport, and importing the material at a later date when the work area on site is available to receive the material.

All unsuitable materials, as defined in Civil Technical Specification Item P-152, shall be disposed of at an offsite legal location, such as a landfill, at the time the material is excavated, and shall not be temporarily stockpiled on the Airport.

When asphalt pavement is milled, the material shall be hauled off site of the airport at the time the pavement is milled. Any asphalt millings that are not used in the formation of subbase shall become property of the Contractor and exported from the site.

Storm drain pipe shall not be stockpiled in the Air Operations Area.

Open trenches shall be limited to no more than 500 linear feet. Open trenches in the RSA shall be properly and completely backfilled and compacted in sufficient time before the end of the work shift.

29. MAG SPECIFICATION MODIFICATIONS

In addition to any other modifications to the MAG specifications contained elsewhere in this Contract, the following changes are made:

a. MAG Section 104.2.4 is deleted and replaced with:

“104.2.4 At the Contractor’s Request: Changes in the plans or specifications, which do not materially affect and are not detrimental to the work or to the interests of the Contracting Agency, may be granted to facilitate the work. Requests shall be in writing and submitted to the Engineer for approval. The Contracting Agency shall be entitled to a reduction in cost equal to one-hundred percent of any cost reductions to the Contractor caused by the change. In no event shall a Contractor requested change result in any additional cost to the Contracting Agency. The Contractor assumes sole responsibility and liability for changes it requests and the Contracting Agency’s approval of a proposed change shall not create any liability on the part of the Contracting Agency.

b. MAG Section 105.11 is deleted and replaced with:

“105.11 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK:

(A) *Duty to Uncover Work:* If a portion of the work is covered contrary to the Engineer’s request or to requirements specifically expressed in the Contract, the Engineer may order in writing that it either be uncovered for observation and/or replaced. The cost of uncovering or replacing the work shall be solely at the Contractor’s expense. The Contractor shall not be entitled to any associated time

extensions or impact costs associated with such a request.

- (B) *Cost of Uncovering Work:* If a portion of the work has been covered that the Engineer has not specifically requested to observe prior to it's being covered or the Contract does not provide for inspection, the Engineer may request the Contractor to uncover the work. If the uncovered work is in compliance with Contract requirements, the Contracting Agency shall bear the cost of uncovering and replacing the work. If the uncovered work is not in compliance with Contract requirements, the Contractor shall bear such costs.
- (C) *Duty to Correct Rejected Work:* Work done contrary to the instruction of the Engineer, work done beyond the lines shown on the plans, or as given, any extra work done without authority, unacceptable work, poor workmanship, work done with defective materials, work damaged through carelessness or found unacceptable by the Engineer, whether observed before or after substantial completion of the work and whether or not fabricated, installed or completed shall be promptly corrected by the Contractor. The Contractor shall bear all costs of correcting such work, including the replacement or repair of other work affected, additional testing and inspection costs, and additional Engineer costs. The Contractor shall not be entitled to recover any impact costs or delay damages and shall not be entitled to any time extensions in any way relating to correcting the work. Work rejected by the Engineer shall be promptly corrected. All work rejected before final acceptance shall be corrected prior to final payment.
- (D) *One Year Duty to Correct Work:* Without limiting the Owner's statutory, common law, or other contractual rights, if within one (1) year after the date of final acceptance, or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty or guarantee required by the Contract, any defective work or work not in accordance with the Contract shall be promptly corrected by the Contractor after written notice by the Engineer or Owner to do so. The Contractor shall bear all costs of correcting such work, including replacement or repair of other work affected by the defect and any other damages resulting from such defect. This obligation shall survive Final Payment to the Contractor.
- (E) *Owner's Right to Correct Non-Conforming Work:* If the Contractor fails to correct nonconforming or defective work within a reasonable time, the Owner may correct it with its own forces. If the Contractor does not correct the work within a reasonable time, the Owner may provide written notice to the Contractor and then remove and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay the Owner's expenses within ten (10) days thereafter, the Owner may sell such materials and equipment and shall deduct its expenses, including additional services by the Engineer.
- (F) *Acceptance of Non-Conforming Work:* If the Owner prefers to accept defective or non-conforming work rather than require its removal and correction, the Owner shall be entitled to recover one-hundred and fifty (150) percent of the cost of removing and correcting the work. Such adjustment shall be effected whether or not final payment has been made."

c. Delete MAG Section 108.4 and substitute the following:

“The Contractor shall furnish the Engineer a construction schedule and monthly updates to the schedule. The Engineer’s review of the Contractor’s schedule is for purposes of: (1) determining the Contracting Agency’s staffing requirements; (2) to ensure general compliance with the contract documents as it relates to the completion of all work; (3) to monitor and evaluate the construction status for purposes of approving progress payments; (4) to evaluate project delays and claims for additional time and compensation; and (5) to identify methods for mitigating delay impacts. In the event the schedule does not contain sufficient information to meet the above purpose or does not comply with the Contract’s schedule and monthly update requirements, the Contractor shall resubmit a new schedule or update with the required information. The Contractor shall not change an accepted construction schedule without the written consent of the Engineer. The orderly procedure of all work to be performed shall be the full responsibility of the Contractor.

Review of a submitted schedule by the Engineer shall in no way be construed as an affirmation or admission that the schedule is reasonable or workable, which responsibility remains the Contractor’s obligation. When the schedule shows a completion prior to the completion date, this extra time between the contract completion date and the scheduled completion date (float), may be used by the Contracting Agency without additional compensation to the Contractor, including extended field and home office overhead and supervision costs. The Contracting Agency shall not be liable to the Contractor for any damages for delay if the Contractor complete the work prior to expiration of the original Contract completion date or as modified by approved change orders, if any.”

d. Delete MAG section 108.11 and substitute the following:

A. *Termination for Convenience:* The Owner may, without cause, terminate the Contract for its convenience, even if the Contractor has not failed to perform any part of the Contract. Termination of the Contract shall be affected by written notice to the Contractor. Upon receipt of such notice, the Contractor shall, unless the notice directs otherwise:

1. Immediately discontinue the work and the placing of all orders and subcontracts in connection with this Contract;
2. Immediately cancel all of the existing orders and subcontracts made hereunder;
3. Immediately transfer to the Owner all materials, supplies, work in progress, appliances, facilities, machinery and tools acquired by the Contractor in connection with the performance of the Contract, and take such action as may be necessary or as the Owner may direct for protection and preservation of the Work relating to this Contract;
4. Deliver all plans, Drawings, Specifications and other necessary information to the Owner;
5. Take all necessary steps to secure the project site and work.

B. *Contractor’s Exclusive Remedy:* If the Owner terminates the Contract for convenience, the following shall be the Contractor’s exclusive remedy.

1. Reimbursement of all actual expenditures and costs approved by the Owner as having been made or incurred in performing the work;
 2. Reimbursement of expenditures made and costs incurred with the Owner's prior written approval in settling or discharging outstanding commitments entered into by the Contractor in performing the Contract; and
 3. Payment of profit, in so far as profits is realized hereunder, of an amount equal to the actual profit on the entire Contract at the time of termination multiplied by the percentage of the completed work. In no event shall the Contractor be entitled to anticipated fees or profits on Work not required to be performed.
- C. *Warranties, Guarantees and Indemnities to Remain in Effect.* All obligations of the Contractor under the Contract with respect to completion of the work, including but not limited to all warranties, guarantees and indemnities, shall apply to all work completed or substantially completed by the Contractor prior to a convenience or for cause termination by the Owner. Notwithstanding the above, any termination by the Owner or payments to the Contractor shall be without prejudice to any claims or legal remedies that the Owner may have against the Contractor for any cause.
- D. *Conversion of Termination for Cause to Termination for Convenience.* If a termination for convenience by the Owner is determined to be wrongful or improper for any reason, such termination shall automatically be converted to a convenience termination and the Contractor's remedy for such wrongful termination shall be limited to the recoveries for a convenience termination.
- E. *Remedy Limited to Damages:* In the event that the Contractor is terminated, whether for cause or convenience, the Contractor's sole remedy shall be for damages. In no event shall the Contractor be entitled to reinstatement or other equitable relief from a court or other forum.
- F. *Termination For Cause:* The Owner may terminate the Contract if the Contractor:
1. fails or refuses to supply enough properly skilled workers or proper materials to ensure compliance with approved schedules or as directed by the Engineer;
 2. fails to make payment to subcontractors for labor or materials in accordance with the respective agreements between the Contractor and subcontractors or A.R.S. § 34-221.
 3. disregards laws, ordinances, rules, regulations or orders of a public authority having jurisdiction;
 4. breaches any provision of the Contract;
 5. fails to furnish the Owner with satisfactory assurances evidencing the Contractor's ability to complete the work in compliance with all Contract requirements.;
 6. fails to comply with approved schedules or fails to comply with Contract schedule requirements; or
 7. fails after commencement of the work to proceed diligently and

continuously with the construction and completion of the work for more than seven (7) days, except as permitted under the Contract.

- G. *Contractor Right to Receive Payment:* When the Owner terminates the Contract for cause; the Contractor shall not be entitled to receive further payment until the work is finished. If it appears the Contractor would have sustained a loss on the entire Contract had it been completed, the Contractor shall not be entitled to any profit and an appropriate adjustment shall be made reducing the Contractor's payment to reflect the Contractor's anticipated rate of loss for the entire Contract.
- H. *Cost of Finishing Work.* If the unpaid balance of the Contract exceeds costs of finishing the work, including compensation to the Engineer and other Owner representatives, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner shall be certified by the Engineer and this obligation for payment shall survive the Contract's termination.

30. CONSTRUCTION SURVEYING LAYOUT

The Contractor shall set all construction stakes, establishing lines, grades and elevations to construct the Project, including necessary utilities, appurtenances and shall be responsible for their conformance with plans and specifications. The Engineer has established survey control points and benchmarks for the project. Refer to the Survey Control Plan.

- a. **Initial Verification.** Prior to setting any construction stakes, the Contractor shall first verify the accuracy of the control points established by the Engineer. If errors are discovered during this verification process, and the control points do not agree with the geometry shown in the plans, the Contractor shall immediately notify the Engineer in writing, explaining the issue in detail. Upon completion of this verification process, the Contractor shall employ an Arizona registered Land Surveyor to certify in writing that all control points established by the Engineer are acceptable and adequate to allow the Contractor's construction staking to meet the accuracy requirements of the specifications.
- b. **General Description.** After the Contractor's registered land surveyor has submitted his written certification verifying the accuracy of the control points established by the Engineer, the Contractor shall set all stakes including, but not necessarily limited to: centerline stakes; offset stakes; reference point stakes; slope stakes; pavement lines; grade stakes; blue tops for subgrade and subbase course; stakes for utilities; drainage; pipe; base and pavement courses; paint striping layouts; supplemental bench marks and permanent record drawing elevations; as well as all other horizontal and vertical controls necessary for complete and accurate layout of the construction work.
- c. **Materials, Personnel and Equipment.** All work shall be done under the direction of a registered land surveyor employed by the Contractor. All survey crew chiefs shall be a registered civil engineer, a registered land surveyor, an engineer in training or a NICET level III (or a higher level NICET level) certified technician. The Contractor shall furnish all materials, personnel and equipment necessary to perform all surveying, staking and verification of the accuracy of all existing control points, which have been provided by the Engineer and/or the City. Included in this work shall be all calculations required for

the satisfactory completion of the project in conformance with the plans and specifications.

Materials and equipment shall include, but shall not necessarily be limited to: vehicles for transporting personnel and equipment; properly adjusted and accurate survey equipment; stakes; flagging and all other devices necessary for checking; marking, establishing and maintaining lines, grades and layout to perform the work called for in the contract. The Contractor shall furnish a sufficient quantity of competent personnel to perform the survey work and layout.

- d. Light Bases.** The Contractor shall stake all airfield light bases.
- e. Discrepancies.** Any discrepancies in the grade, alignment, quantities, locations or dimensions detected by the Contractor shall immediately be brought to the attention of the Engineer. Changes to the project plans will not be allowed without the written approval of the Engineer.
- f. Record Drawings.** The work shall include establishing and marking the "Record Drawings" with coordinates, elevations and changes to the design, as well as locating existing utilities with coordinates and elevations. Refer to A.R.S. § 32-152.
- g. Measurement and Payment.** Survey will be measured for payment by the lump sum. Travel time shall not be measured for payment. Survey work for quality control surveys shall not be measured for payment but shall be considered incidental to the Contractor Quality Control program.

Payment will be made under:

Item SP-30.1 Construction Survey Layout – per Lump Sum

31. MISCELLANEOUS REMOVALS AND OTHER WORK

The work under this item shall consist of removing and disposing of items not specifically identified as another item of work. This may include storm drain pipe, catch basins, asphalt covered concrete pavement, concrete, obliterating existing paint striping, and other miscellaneous work necessary to complete the project that involves a removal or relocation that is not specifically identified as another items of work.

Measurement and payment for this item will be by the lump sum for all of the work complete under this item.

Payment will be made under:

Item SP-31.1 Miscellaneous Removals and Other Work – per Lump Sum

32. LOCATION OF UNDERGROUND UTILITIES (U-200)

This Item shall govern the field location of all underground existing utilities in areas to be improved, to avoid conflicts with proposed surface or underground improvements. Work under this section shall include designation and potholing as required on existing underground utilities. This shall include, but not be limited to, the location of electrical and communication ducts,

airfield lighting and control cables, FAA NAVAID cables and environmental infrastructure. It is the intent of this specification to provide for the location of existing utilities and, by hand digging, particularly of direct burial cables and duct banks.

The contractor is hereby advised that the location of all utilities, as shown on the Plans, may not be complete or exact. The Contractor shall satisfy himself/herself as to the exact location of the utilities by contacting all utility companies before proceeding with the work and by having a private utility locating firm locate and identify all utilities at the work site prior to any construction. The Contractor shall be responsible for any and all costs as a result of damage caused by construction activities to public / private property and utilities.

CONSTRUCTION METHODS

- a. Utilities, utility appurtenances and cables encountered by the Contractor during the construction of this project shall be protected by the Contractor as needed to permit construction and to conform to the finished grades on the project. Use of mechanical equipment of any kind to verify a utility location is expressly prohibited. The Contractor shall immediately repair any damaged utilities at his own expense.
- b. Coordinate all contacts with companies maintaining utilities at the Airport through the Resident Project Representative (RPR) prior to any excavation/digging. Provide the RPR with written documentation of how utility locations were verified.
- c. Continuously maintain utilities for facilities and/or systems which are or may be affected by work associated with the project. Prepare and maintain a contingency plan, approved by the RPR, to restore to service all utilities and/or control/signal cables which may be placed out of service or damaged during performance of the work. The Contractor shall provide the RPR, DVT Operations and FAA Sector Manager with written reports on all cable cuts.
- d. Take all measures necessary to accurately locate all the routing of underground cable and utilities within project areas to be excavated, trenched or drilled. Contractor shall locate underground cables and utilities by designation, and where necessary, potholing and/or hand digging. Once located, place highly visible and durable markers along all such cable and utility route at intervals of not greater than 25 feet. The Contractor shall maintain these markers in their original location throughout the project. The Contractor shall also be responsible for providing and maintaining a field survey and plan of the marker locations and shall replace any disturbed markers at his own expense. Do not use power equipment with teeth when excavating where cables are marked. Obtain RPR approval of proposed marking devices. Use semi-permanent markers which are low profile, frangible and non-metallic within runway/taxiway safety areas and navigational and restricted zones.
- e. Utilities located by potholing and/or hand digging shall be surveyed by the Contractor. Coordinates and elevations shall be submitted to the RPR and marked on the Contractor maintained record drawings.

CONTRACTOR QUALITY CONTROL

32-3.1 The Contractor shall be responsible for developing and implementing a Contractor Quality Control Program including inspection and testing to assure compliance with the requirements of this section in accordance with Civil Technical Specification Item C-100.

METHOD OF MEASUREMENT

32-4.1 All items of work specified in this section will be measured as one lump sum.

BASIS OF PAYMENT

32-5.1 Payment for location of underground utilities, measured as prescribed above, shall be paid as one lump sum. Such payment shall be full compensation for furnishing all labor, equipment, tools and materials and for all designation, preparation, excavation, backfilling and placing of materials, and for all incidentals necessary.

Payment will be made under:

Item SP-32.1 Location of Underground Utilities (U-200) – per Lump Sum

33. WORK DONE BY CITY FORCES

There are items of work that are to be performed by the City that the Contractor will have to build into his schedule. This includes paint removal of any paint containing lead, prior to pavement removal, and asbestos testing of the concrete. There shall be no separate payment for coordination between the Contractor and City related to this item.

34. AIRPORT SAFETY AND SECURITY (M-003)

The Contractor shall carry out his operations in a manner that will cause a minimum of interference with air traffic and shall cooperate with the FAA, the City, the Phoenix Goodyear Airport (GYR) tenants, flight schools and Fixed Base Operators, and other contractors working in the area.

All work shall be completed in accordance with the Construction Safety and Phasing Plan (CSPP) adopted for the project, the Contractor prepared Safety Plan Compliance Document (SPCD), FAA Advisory Circular 150/5370-2G or current series, and the City of Phoenix Department of Aviation's Airport Construction Safety Manual and the Supplementary Conditions, Special Provisions and Technical Specifications of these Contract Documents.

Phasing of the work will be necessary to minimize impacts on airport operations during construction. The GYR priorities for phasing of the work are shown in the CSPP Appendix E, Exhibit B.

Runways 7R/25L and 7L/25R will be closed when working in their respective Runway Safety Areas (RSA). Construction within the RSA shall take place during night time airport closures between hours specified in the CSPP, or as approved by GYR Operations Staff. The airport operations personnel will provide "Lighted X's" to mark all runway closures in accordance with the provisions of the CSPP and the Construction Contract Documents. **All work within the Runway Safety Area will require that the runway be closed.**

The preparation of a Safety Plan Compliance Document (SPCD) by the Contractor to indicate how it will comply with the CSPP, the project Supplementary Conditions, and Special Provisions is included in the Contractor's scope of work.

Any conflicts between the CSPP, the Contract Documents and Special Provision Item 34, Airport Safety and Security (M-003) shall be reported to the Aviation Department Project Manager, GYR Aviation Supervisor and the Engineer of Record for resolution. Until resolved, the Contractor shall comply with the most stringent requirement.

The Contractor shall hold weekly airfield coordination meetings with GYR Airport Operations. Additionally, the Contractor shall meet with Airport Operations prior to the start of each shift to discuss the day's anticipated work activities.

All vehicles shall have flashing amber lights in accordance with the CSPP and Special Provision Item 34. All vehicles shall be required to have the headlights and flashing amber lights on at all times while on the airfield.

The Contractor shall be required to supply, place, maintain, move and store the items listed herein, as appropriate, to facilitate construction and protect air traffic. The Contractor shall keep on site an adequate extra supply of these items.

MATERIALS

34-2.1 Red warning lights. Red warning lights shall be flashing lights meeting the requirements of the "Manual on Uniform Traffic Control Devices for Streets and Highways" for Type A and Type B flashers or as shown in the *Airport Construction Safety Manual*. All warning lights used on the airfield shall be RED only.

34-2.2 Warning markers. (For use on roadways and service roads only) Warning markers shall be the type and size detailed on the plans or shown in the CSPP. Markers shall be equipped with a red warning light per paragraph 003-2.1.

34-2.3 Temporary Runway/Taxiway closed devices and symbol. The airport operations personnel will provide "Lighted X's" to mark all runway closures. The closed devices shall be portable lighted "X", SWEEPSTER Model LX Runway Closure Marker conforming to FAA AC 150/5345-55A *Specification for L-893 Lighted Visual Aid to Indicate Temporary Runway Closure* or approved equal.

All other temporary closure symbols, including vinyl "X's", shall be painted or applied on the pavement surface in accordance with the CSPP, plans and Civil Technical Specification Item P-620.

34-2.4 Low and medium level barrier systems. Medium and low-level barriers shall be the Airport Runway Safety Barricade Model AR-1 and AR-2 Multi-Barrier as manufactured by Off The Wall Products, LLC, or approved equal. The AR-1 barrier medium level sections shall be eight (8) feet long and two (2) feet high and the AR-2 low level barrier sections shall be eight (8) feet long and ten (10) inches high and shall have reflective sheeting on the side facing the active airfield. Both sections shall be interlocking and shall be ballasted with water to prevent damage from jet blast. Each barricade section shall be equipped with a Model: SL-H867R Solar Powered Safety lights as manufactured by Leotek Electronics USA Corp., or approved equal. The barriers shall be furnished, maintained and relocated during each phase by the Contractor, and at the completion of the Contract they shall become property of the City.

34-2.5 Vacuum sweeper. Vacuum Sweeper shall be Tymco, Model HSP-600 or Elgin Model Crosswind, or approved equal. A sweeper and operator shall be available at all times during construction activities.

34-2.6 Safety area support. Reinforced structural steel plates, precast slabs or other approved material necessary to cover open excavation in the Runway Safety Area shall conform to Paragraph 003-5.1(1)(c)(i). Excavations that cannot be covered to provide the required protection shall be backfilled.

34-2.7 Security check points and controlled crossings. Provide as shown on the plans, in the CSPP, in Appendix A of the SPCD, and as detailed within this specification, the items necessary to control access to the Air Operations Area (AOA) through Entry Gate #2 and control crossings at active taxiways. These items include, but are not limited to the following:

- 1) Flaggers equipped for day time and nighttime operations.
- 2) Marking, symbols, barrier systems and warning markers in accordance with the CSPP and this specification.

RESPONSIBILITIES

34-3.1 Control requirements. The Contractor's responsibilities for work areas are as follows:

- 1) The Contractor shall be held responsible for controlling his employees, subcontractors, and their employees with regard to traffic movement. The Contractor is required to submit a Safety Plan Compliance Document (SPCD) to indicate how he/she will comply with the Construction Safety and Phasing Plan (CSPP) and how he/she will safely operate within the AOA. This SPCD shall conform to Chapter 2, Safety Plans, *Operational Safety on Airports During Construction*, AC 150/5370-2G and the Aviation Department Airport Construction Safety Manual, June 2006. It shall be submitted and approved by the Airside Operations Manager before the commencement of any construction. Information needed for preparation of the SPCD is located in AC 150/5370-2G, the CSPP and at the end of this section.
- 2) The Contractor shall rebuild, repair, restore, and make good at his own expense all injuries or damages to any portion of the work occasioned by his use of these facilities before completion and acceptance of his work.
- 3) The Contractor shall submit to the Engineer in writing a detailed work plan for each construction phase. The work plan shall include, but not be limited to, paving sequence, marking sequence, maintenance of airfield electrical and NAVAID power and control circuits. This plan shall be submitted 14 calendar days prior to the start of each construction phase. No work within the construction phase may commence until the phase work plan is approved.
- 4) The Contractor shall submit to the Engineer in writing a plan, by construction phase, for controlling construction equipment and vehicular movements, including material haul roads, in the Air Operations Area (AOA). This plan shall be submitted at the Pre-Construction Meeting and prior to each construction phase. No work may commence until this plan is approved by GYR Airport Operations. The plan must include material haul roads.

- 5) **Paved surfaces shall be kept clear at all times and specifically must be kept free from all Foreign Object Debris (FOD) which might damage aircraft.**
- 6) The Contractor shall prepare a security badge control plan for review by Airport Operations. The plan shall be submitted prior to or at the Pre-Construction Meeting. No work may commence until this plan is approved. The plan shall be prepared on the Contractor's company letterhead and signed by the company representative who is authorized to sign the badge applications. The plan shall describe in detail the Contractor's and/or subcontractor's plan to control badges.
- 7) The Contractor shall ensure that no personnel or equipment enters the active movement areas or their associated Object Free Areas without the appropriate Airport Operations escort. **Access into movement areas or Object Free Areas without an Airport Operations escort is prohibited!**
- 8) The Contractor will be required to coordinate his work so as to satisfy clearance requirements for arrival and departure of aircraft in compliance with the CSPP and in compliance with FAA Advisory Circular 150/5370-2G concerning Operational Safety on Airports during Construction.

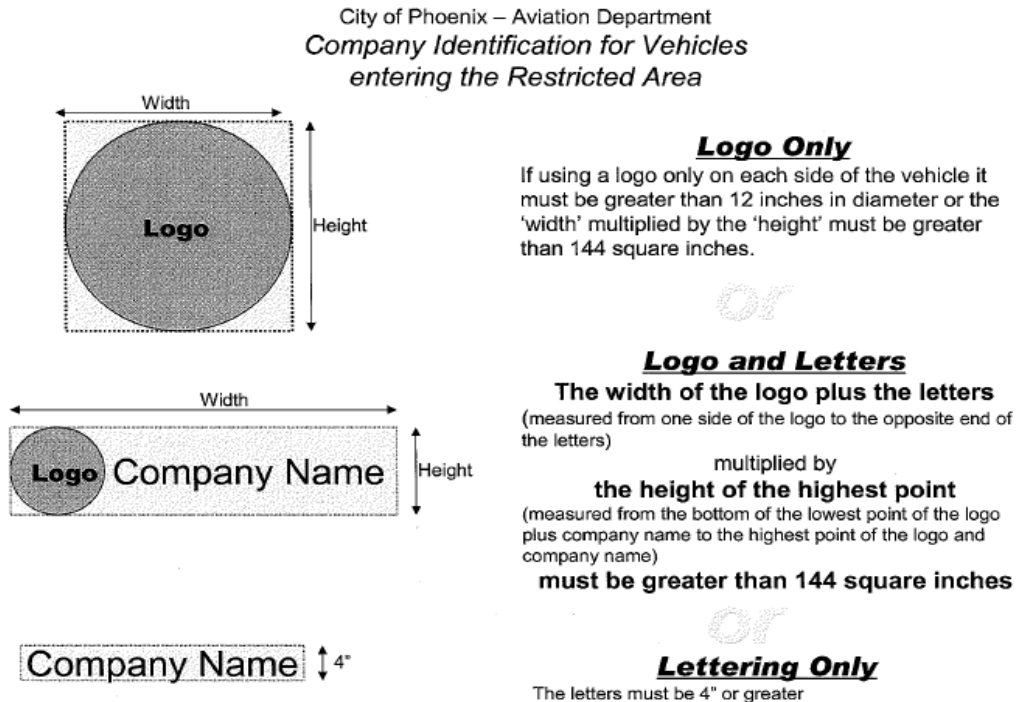
34-3.2 Vehicle and pedestrian control. Vehicle and access routes for airport construction shall be controlled as necessary to prevent inadvertent or unauthorized entry of persons, vehicles or animals onto Air Operation areas. No vehicle shall enter the AOA except at predetermined locations. The amount of construction traffic will require a flag person to control traffic crossing taxiways and other aircraft movement areas. Contractor personnel who operate vehicles in the AOA shall comply with the Airport Operations rules and regulations for vehicle marking, lighting, and operation. Failure to comply may result in contract non-compliance costs and Notice of Violation assessments, per paragraph 003-3.10.

34-3.3 Control and warning devices. During construction operations near active taxiways or runways the Contractor shall furnish and maintain medium and low level barricades equipped with red warning lights along the edges of the runway and taxiway safety areas to warn construction equipment to stay clear of the active airfield pavement as well as warn pilots of areas having construction hazards. Per paragraph 003-2.4 barricades shall be equipped with red lights acceptable to the Airport Operations. The Contractor shall furnish and maintain warning markers with red warning lights along the edges of the runway safety area as designated and detailed on the plans. The Contractor shall maintain red warning lights and warning flags around all equipment, stockpiles, or other areas as directed by the Engineer and Airport Operations.

The Contractor shall provide the phone numbers of five (5) of its responsible personnel, including the project superintendent, and three (3) each responsible personnel, from the paving and safety subcontractors, each of whom may be contacted in an emergency. Personnel shall be on call 24 hours per day for maintaining construction hazard lighting and barricades. The Contractor shall employ watchmen to maintain and service all traffic control equipment. The project superintendent, foreman and on-site manager for the Contractor and all subcontractors shall have cell phones with a "602", "480" or "623" area code.

34-3.4 Vehicle marking and identification. All permitted vehicles operating in the AOA shall display in full view above the vehicle a 3' x 3' or larger, orange and white checkerboard flag,

each checkerboard color being 1' square. Any vehicle operating on the AOA shall be equipped with a flashing amber dome-type light, mounted on top of the vehicle and of such intensity to conform to local codes for maintenance and emergency vehicles. All vehicles operating within the airfield boundary which are approved for unescorted access shall be identified with a painted or magnetic sign on each side of the vehicle bearing the name and logo of the company. The sign shall conform to the requirements below:



Rented or leased vehicles cannot be granted unescorted access unless the above signage is placed on it. All vehicles with unescorted access must have available for inspection, when entering the Restricted area or while in the Restricted area, the current registration and proof of insurance for the vehicle.

Vehicles making only occasional visits to the job site are exempt from the identification requirements contained above provided that the Airside Operations Manager is notified and a properly identified vehicle escorts them into, through, and out of the airport secured area. These and other vehicles needing intermittent identification may be marked with tape or with magnetically attached markers that are commercially available to meet identification size and content requirements.

34-3.5 Vehicle traffic and operations. When any vehicle other than those approved for use in the AOA is required to travel to or from the work area or over any portion of the work area, shall be escorted by a vehicle properly identified to operate in the area and be provided with a flag on a staff attached to the vehicle. All construction vehicles/equipment shall have automatic signaling devices to sound an alarm when moving in reverse. All equipment shall be operated within the approved speed limits.

All vehicles and/or construction equipment operating inside the active AOA, but outside of the designated haul roads, shall be escorted by Airport Operations, who will maintain radio contact

with the ATCT. Crossing the active runway shall not be permitted. Vehicular traffic routes which need to cross an active taxiway shall be coordinated in advance (at least 72 hours) with Airport Operations to ensure that proper Notices to Airmen (NOTAMs) are in place. These prearranged traffic routes must be controlled by flag-persons as detailed on the plans. Aircraft **always** have the right-of-way. Construction equipment shall **always** yield to aircraft. Construction vehicle traffic shall **never** cross an active taxiway unless escorted by Airport Operations or at the pre-approved crossing points while crossing guards are stationed.

At such a pre-approved taxiway crossing point, the Contractor shall have a flag-person stationed on each side of the crossing point to monitor aircraft movement and to direct construction traffic. The flag-person shall be equipped with handheld signs or flags to assist in directing construction traffic. For nighttime construction operations, the flag-person shall also be equipped with lighted wands and light plants on each side of the taxiway. In addition, one vacuum sweeper and one water truck shall be dedicated to and stationed full time at each active taxiway crossing to maintain the surface of the taxiway free from construction traffic debris. Mud and other material tracked onto taxiway surfaces shall be removed by hand if necessary to achieve its complete removal.

Prior to entering any work site within the AOA, the Contractor will physically meet with Airport Operations to brief each other on the intended activities. The Contractor must also arrange a physical inspection of the work area with Airport Operations prior to leaving any area that has been closed for work, or that has been used for a crossing point or haul route by the Contractor.

34-3.6 Vehicle parking. All vehicles shall be parked and serviced in the designated staging and employee parking areas shown on the plans. The Contractor is responsible for transporting his/her employees from these areas to the jobsite.

34-3.7 Radio communications. The control of vehicular activity on the AOA is of the highest importance. This requires coordination with airport users and Air Traffic Control Tower (ATCT). The Contractor shall have no direct contact with the ATCT. All communications with the ATCT shall be coordinated through Airport Operations. However, the Contractor shall properly train his/her personnel, particularly flag-persons, on the proper procedures for monitoring radio frequencies.

34-3.8 Airport security requirements. The airport is operated in strict compliance with Federal, State and local rules and regulations, which prohibits unauthorized persons or vehicles in the AOA. Equipment and personnel will be restricted to the work areas defined on the plans. Any violations by Contractor's personnel will subject the Contractor to the contract non-compliance assessments imposed by the Aviation Department.

Airport restricted areas are fenced and must remain fenced at all times. No temporary airport perimeter security fencing is required for this project. If, as the project progress, any temporary security fences and/or gates are required they shall be constructed by the Contractor according to specifications set by Airport Operations. The temporary fence and gate must be approved by Airport Operations before any of the regulated perimeter security fence may be altered. If needed, temporary fencing shall be constructed in accordance with FAA Specification F-162. The gates will remain closed and locked, or if used continuously for ingress and egress, the Contractor will provide approved guards trained by Airport Operations to monitor access to the Airport. The Contractor shall provide guards with a roster of his personnel and ensure that each individual has adequate identification. Contractor locks are not permitted on any airport gate.

Gates will be staffed during shift working hours and will be secured when there is no activity at that location. The Contractor will be responsible for a 24-hour advance notification to Airport Operations regarding the scheduling of the use of the various security check point gates. There will be a communications system for emergency responses, security breaches, etc.

Entrance to the airfield is subject to strict security regulations. All vehicles must meet minimum identification requirements and have proof of insurance on file with GYR Airport Operations.

The Contractor shall maintain the security integrity between the public and AOA. All barrier designs and their phasing shall be submitted to the Aviation Department and approved by them in writing prior to erection.

Construction personnel should wear company identification (company badge, shirt, hat, etc. which include the company logo) at all times, subject to the approval by the GYR Operations.

The Contractor shall restrict passage into the Airport Operations Area to badged persons, vehicles and equipment displaying his identification or that of the Airport. Should the Contractor wish to allow visitors, vendors or delivery through his access point, he shall provide an escort in accordance with escort procedures.

The Contractor shall be responsible to provide at his own cost a badged escort for all vehicles that do not operate on a daily basis within the AOA. Escorted vehicles shall not be left unattended. The badged escort shall remain with the escorted vehicle at all times while on the AOA and shall be escorted back and forth to the point of entry. There will be no exceptions to this requirement.

The Contractor is required to submit a plan on how he/she will safely operate within the AOA. This plan shall be submitted and approved by the GYR Airport Operations Manager before the commencement of any construction. The Contractor is required to prepare, submit for approval and maintain during construction a plan for managing Airport Access Cards for his/her employees, subcontractors or any other party recommended by the Contractor for badging. This plan shall be submitted to Airport Operations prior to the Pre-Construction Meeting.

The Contractor will contact Airport Operations, telephone (623) 869-0975 ten (10) days prior to start of construction to submit the necessary airport security information for all vehicles and personnel required inside the restricted area during construction.

34-3.9 Violation of responsibilities. Any violation of 003-3.1 - 003-3.8 shall be considered a violation of the Contract itself and shall be sufficient cause for halting the work without extending the time limit of the job.

34-3.10 Contract non-compliance. Due to both the safety and security precautions necessary at Phoenix Deer Valley Airport, failure of the Contractor to adhere to the prescribed requirements/regulations has consequences that may jeopardize the health, welfare and lives of the customers and employees at Phoenix Deer Valley Airport, as well as the Contractor's own employees. Therefore, if the Contractor is found to be in non-compliance with the security, airfield badging/licensing and airfield safety requirements by either Airside Operation's Personnel or the Engineer or his representatives, the Airside Operations Division will issue Notices of Violation (NOV). The Contractor may appeal the NOV, however appeals must be made in writing, and within four (4) calendar days of the offending incident, to the City of

Phoenix's Project Manager. The appeal would need to state, in sufficient detail, why the NOV/circumstances is unwarranted. A final and binding decision on the appeal will be made by the City of Phoenix's Project Management Team within ten (10) working days of receipt of the appeal, the Contractor will then be notified of this decision in writing. No further appeals to the specific NOV will be considered or accepted.

The City of Phoenix Airside Operations has the option to issue warnings on the first offense if the incident justifies it. Individuals involved in a non-compliance violation may be required to surrender their security badge and airfield driver's license pending investigations of the matter and the outcome of the possible appeal.

- 1) Should any violation caused by the Contractor result in an expense to the City of Phoenix, the City shall recover the total of those expenses from the Contractor. The expenses will be determined by the Aviation Department and will consist of the following:
 - a) Labor hours of City staff or consultants which were devoted to investigate and resolve the violation, including overhead and labor burden mark-ups.
 - b) Expenses for materials or equipment necessary to make the situation temporarily or permanently safe.
 - c) Work by others, either contracts, or services, or by airlines, which were performed in order to rectify the situation.
 - d) Any monetary sanctions assessed by the FAA, TSA or others

Incursions are defined as "any entrance onto an active runway, taxiway, taxilane or apron that may or may not subject any aircraft or crash fire rescue vehicle to yield, stop or change direction to avoid the sudden entrance."

The Airport's Notice of Violation (NOV) program also applies to all security badge holders and the companies they work for. Airport NOVs can result in the suspension or revocation of a companies or individual's privilege to do work at the airport. Responsibilities for security badge holders and their companies are communicated through the badge application process.

COORDINATION OF CONSTRUCTION ACTIVITIES

34-4.1 Work scheduling and accomplishment. The Contractor shall contact GYR Airport Operations each day before beginning work to coordinate the status and nature of work to be done that day. Access to work sites within the AOA will require daily coordination with Airport Operations prior to gaining access. The Contractor shall also report to Airport Operations at the end of each day to schedule the work he plans to do on the following day.

Violations of any coordination requirements shall be considered a violation of the Contract itself and shall be sufficient cause for halting the work without extending the time limit of the job.

SAFETY REQUIREMENTS

34-5.1 General. Before entering upon or crossing any runway or taxiway, or aircraft movement area, the Contractor shall receive proper clearance from GYR Airport Operations. Emergencies and operating conditions may necessitate sudden changes, both in airport operations and in the operations of the Contractor. Aircraft operations shall always have priority over any and all of the Contractor's operations. Should runways or taxiways be required for the use of aircraft and should Airport Operations deem the Contractor to be too close to active runways or taxiways the

Contractor shall suspend his operations, remove his personnel, plant, equipment, and materials to a safe distance and stand by until the runways and taxiways are no longer required for use by aircraft. There will be no compensation for delays or inefficiencies due to these changes.

The Contractor shall ensure that no personnel or equipment enters into the active movement areas or their associated Object Free Area without the appropriate Airport Operations escort. **Access into movement areas or Object Free Areas without an Airport Operations escort is prohibited!**

Throughout the duration of the job, any practice or situation that Airport Operations or the Engineer determines to be unsafe or a hindrance to regular airport operations shall be immediately rectified.

Any violation of these or the following safety requirements shall be considered a violation of the Contract itself and shall be sufficient cause for halting the work without extending the time limit of the job.

- (1) The following publications contain definitions/descriptions of critical airport operating areas. The areas defined below pertain to airfield safety requirements and are referenced throughout the Contract Documents. Copies of Advisory Circulars may be found at the FAA website:

http://www.faa.gov/airports_airtraffic/airports/resources/advisory_circulars/

and, Federal Aviation Regulations (FARs) can be found at:

http://www.faa.gov/regulations_policies/faa_regulations.

The Contractor is always to use the latest version of each AC or regulation.

- (a) Advisory Circular 150/5370-2G, "Operational Safety on Airports During Construction" sets forth guidelines to assist airport operators in with the requirements of federally funded construction projects.
- (b) FAR Part 77, "Objects Affecting Navigable Airspace," Current Edition: Establishes standards for determining obstructions to navigable airspace. Civil airport imaginary surfaces are defined in the publication. It also sets forth requirements for notice of certain proposed construction or alteration. Notice of construction provides a basis for recommendations for identifying the construction or alteration in accordance with AC 70/7460-1, "Obstruction Marking and Lighting," Current Edition.
- (c) AC 150/5300-13B, "Airport Design" Current Edition: Establishes design, operational and maintenance standards for airports. Standard terms used in the contract plans and specifications are defined below:
 - (i) Runway Safety Area (RSA) - The defined surface surrounding the runway over which aircraft should, in dry weather, be able to cross at normal operating speeds without incurring significant damage. A safety area is graded, drained and compacted. It is free of any holes, trenches, humps or other significant surface variations or objects, other than those which must be there because of their

essential aeronautical function. The safety area requires the capability of supporting maintenance, firefighting, and rescue vehicles under normal (dry) conditions.

Prior to re-opening the runway each morning, the RSA must comply with the following:

- 1) The area(s) shall be able to support an aircraft at normal operating speeds without the aircraft incurring significant damage.
- 2) For the first 200 feet beyond the runway ends, the longitudinal grade of the RSA is between 0 and 3 percent, with any slope being downward from the runway ends. For the remainder of the RSA, the maximum allowable downward grade is 5 percent and the maximum allowable upward grade shall not penetrate the 20:1 approach surface from the end of the runway, as defined in FAR Part 77. However, limitations on longitudinal grade changes are plus or minus 2 percent per 100 feet.
- 3) For the RSA during construction (200 feet from runway centerline and up to 200 feet from the runway ends), the transverse grade from the edge of the runway pavement is 1.5 to 5 percent downward. For areas beyond 200 feet from the runway ends, the maximum allowable transverse grade shall be 5%, upward or downward. Transverse grade changes should be warped smoothly.
- 4) The maximum permissible drop-off at the edge of the runway pavement is 3 inches.
 - (ii) Object Free Area (OFA) – An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigations or aircraft ground maneuvering purposes.
 - (iii) Obstacle Free Zone (OFZ) – The OFZ is the airspace below 150 feet above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway, and for missed approaches. The OFZ is subdivided as follows:
 - (1) Runway OFZ. The airspace above a surface centered on the runway centerline.
 - (2) Inner-approach OFZ. The airspace above a surface centered on the extended runway centerline. It applies to runways with an approach lighting system.
 - (3) Inner-transitional OFZ. The airspace above the surfaces located on the outer edges of the runway OFZ and the inner-approach OFZ. It applies to runways with approach visibility minimums lower than $\frac{3}{4}$ -statute mile.
 - (iv) Taxiway Safety Area (TSA) – A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.
 - (v) The dimensioning of RSA's, OFA's and OFZ's are determined by the type of

aircraft utilizing the runways and taxiways. AC 150/5300-13B provides detailed information for determining the required dimensioning for various safety areas. For the Phoenix Deer Valley Airport, the following are the locations of Runway and Taxiway Safety Areas, Object Free Areas and Obstacle Free Zones.

- (1) Runways 7R/25L and 7L/25R: The RSA is 250 feet from each side of the runway centerline and extends 1,000 feet beyond each end of the runways. The OFA is 400 feet from each side of the runway centerline. The OFZ is 200 feet from each side of the runway centerline and beyond the ends of the runway.
- (2) Group II aircraft is the Design Aircraft for Phoenix Deer Valley Airport. Workers and equipment are to provide 26' wingtip clearance during taxiing operations if Taxiway remains open to traffic. The TSA and OFA for the various groups of aircraft are:

Group II – TSA and OFA Dimensions

- (a) TSA 39.5' from Taxiway Centerline
- (b) OFA 65.5' from Taxiway Centerline

- 5) The Contractor shall acquaint his supervisors and employees with the airport and operations that are inherent to Phoenix Deer Valley Airport and shall conduct his/her construction activities to conform to all routine and emergency air traffic requirements and guidelines for safety specified herein. **The Contractor shall be responsible for providing all safety devices as required for the protection of his personnel.**
- 6) Protection of all persons shall be provided throughout the progress of the work. The work shall proceed in such a manner as to provide safe conditions for all workers and personnel. The sequence of operations shall be such that maximum protection is afforded to ensure that personnel and workers in the work area are not subject to any dangerous conditions. The Contractor must provide safety measures to guard against injury.
- 7) During the performance of this contract, the airport facility shall remain in use to the maximum extent possible. Use of areas near the Contractor's work will be controlled to minimize disturbance to the Airport's operation. The Contractor shall not allow employees, subcontractors, suppliers, or any other unauthorized person to enter or remain in any airport area which would be hazardous to persons.
- 8) All work to be performed which is too close to an active runway, taxiway or apron under operational conditions shall be performed when the runway, taxiway or apron is not in use. Such work shall not be accomplished without prior permission from Airport Operations. Requested closings shall be directed to the Airport Operations in writing at least 72 hours in advance so that the proper Notice-to-Airmen (NOTAM) may be issued. Only Airport Operations have the authority to open or close runways or taxiways.
- 9) The Contractor shall be aware of the following types of safety problems and/or hazards. These problems or hazards shall not be permitted. Should any of these problems or hazards arise during construction, the Contractor shall immediately rectify/correct the problem or hazard to the satisfaction of the Engineer and Airport Operations Personnel:

- (a) Trenches, holes, or excavations on or adjacent to any open runway or in safety areas.
- (b) Unmarked/unlighted holes or excavation in any apron, open taxiway, open taxilane, or related safety area.
- (c) Mounds or piles of earth, construction materials, temporary structures, or other objects in the vicinity of any open runway, taxiway, taxilane, or in a related safety, approach, or departure area.
- (d) Vehicles or equipment (whether operating or idle) on any open runway, taxiway, taxilane, or in any related safety, approach, or departure area.
- (e) Vehicles, equipment, excavations, stockpiles, or other materials which could degrade or otherwise interfere with electronic signals from radios or electronic navigational aids (NAVAIDS).
- (f) Runway surfacing projects resulting in excessive lips greater than 1 inch for runways and exceeding 3 inches for edges between the old shoulder and new surfaces at runway edges and ends.
- (g) Unmarked utility, NAVAID, weather service, runway lighting, or other power or signal cables that could be damaged during construction.
- (h) Objects (whether or not marked or flagged) or activities anywhere on or in the vicinity of the airport which could be distracting, confusing, or alarming to pilots during aircraft operations.
- (i) Unflagged/unlighted low visibility items (such as tall cranes, drills, and the like) anywhere in the vicinity of active runways, or in any approach or departure area.
- (j) Misleading or malfunctioning obstruction lights or unlighted/unmarked obstructions in an approach to any open runway.
- (k) Inadequate approach/departure surfaces needed to assure adequate landing/takeoff clearance over obstructions or work or storage areas.
- (l) Inadequate, confusing or misleading (to user pilots) marking/lighting of runways, taxiways, or taxilanes, including displaced or relocated thresholds.
- (m) Water, dirt, debris, or other transient accumulation which temporarily obscures pavement marking, pavement edges, or derogates visibility of runway/taxiway marking or lighting.
- (n) Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA.
- (o) Trash or other materials with foreign object damage (FOD) potential, whether on runways, taxiways, or aprons, or in related safety areas.

- (p) Inadequate barricading or other marking which is placed to separate construction or maintenance areas from open aircraft operating areas.
 - (q) Failure to control vehicle and human access to open aircraft operating areas.
 - (r) Construction/maintenance activities or materials which could hamper the response of aircraft rescue and firefighting (ARFF) equipment from reaching all aircraft or any part of the runway/taxiway system, runway approach and departure areas, and aircraft parking locations.
 - (s) Bird attractants on airport, such as edibles (food scraps, etc.), miscellaneous trash, or ponded water.
- 10) The Contractor shall conduct activities so as not to violate any safety standards contained herein. The Contractor shall inspect all construction and storage areas as often as necessary and promptly take all steps needed to prevent/remedy any unsafe or potentially unsafe conditions/activities discovered.
- 11) Before actual commencement of construction activity, the Contractor shall notify Airport Operations and the Engineer in writing of his intentions to begin construction, stating the proposed time, date, and work area in order for the appropriate Notice-to-Airmen (NOTAM) to be issued. Only GYR Airport Operations have the authority to open or close runways or taxiways and to issue NOTAMs. In order to properly communicate these closures Airport Operation must receive these requests 72 hours prior to the scheduled closure. Upon completion of work and return of all related areas to standard conditions, the Contractor shall again notify Airport Operations and the Engineer in writing, and describe the area that is complete and available for normal airport operations.
- 12) Debris. Debris, waste and loose material or any other FOD (including dust and dirt) capable of causing damage to aircraft landing gear, propellers or being ingested in jet engines shall not be allowed on active aircraft movement areas or adjacent infield areas. Materials observed to be within these areas shall be removed immediately and/or continuously by the Contractor. The Contractor shall be required to have a sweeping machine and operator on site, ready at all times during construction activity. Where travel on or across runways, ramp areas, taxiways, or aircraft aprons is required, the Contractor shall provide adequate personnel and equipment to keep such surfaces clear of debris at the discretion of the Engineer. Closed pavements shall be swept clean prior to reopening to aircraft traffic. Exposed earth in excavation areas within 75 feet of the centerline immediately adjacent to active taxiways shall be covered to prevent dust from jet blast. Cover material shall be weighted to prevent movement from jet blast.
- 13) Flagpersons. In accordance with the specifications, the Contractor shall furnish, at his own expense, flagpersons as necessary to control his traffic unless otherwise directed by the Engineer.
- 14) Trenches, Excavations and Stockpiled Material. Open trenches or excavations exceeding 3" in depth and 3" in width or stockpiled material will not be permitted within the limits of restricted areas of operational runways or taxiways. Covering for open trenches or excavations shall be of sufficient strength to support the weight of the heaviest aircraft operating on the runway or taxiway. Trenches and excavations that

cannot be protected by covering shall be backfilled, and re-excavated if necessary at the end of each day or before opening the restricted area to operational use of the runway or taxiway. Open storm drain trenches, electrical duct or conduit trenches, utility trenches or any other trench shall be limited to 500-feet accumulative in length at any time. Open trenches in the runway safety area shall be properly and completely backfilled and compacted in sufficient time before the end of the work shift.

15) Construction in Proximity to Active Runways and Taxiways.

Runway Sides: If appropriate construction/maintenance NOTAM has been issued, construction is permissible as close as 250 feet from the centerline of the active runway provided that all Airport Operations and FAA criteria are met. The 250 feet shall be clearly marked in the infield areas with approved barricades at 10-foot intervals. Runway Ends: No work will be permitted within 1,000 feet of the active runway threshold.

Taxiway Sides: If appropriate construction/maintenance NOTAM has been issued, construction is permissible as close as the dimensions shown on the Construction Safety and Phasing Plan (CSPP) provided that all Airport Operations and FAA criteria are met. This dimension(s) shall be clearly marked in the infield areas using approved barricades at 10-foot intervals. Personnel and equipment working within taxiway Object Free Areas (OFA) must at all times be able to give way to taxiing aircraft.

16) Equipment Height Restrictions.

Maximum permissible equipment height varies by location and by construction phase. Maximum equipment height requirements are shown in the CSPP and shall not be exceeded unless prior approval is obtained from the Engineer and Airport Operations. Atop all equipment booms shall be mounted the white and orange checkered flag described in Paragraph 003-3.4. The top ten feet (10') of these booms shall be painted fluorescent orange and they shall be equipped with a red obstruction light. Any crane erections shall be coordinated with Airport Operations and the Engineer during every shift.

17) Miscellaneous.

- (a) Open flame, welding or torch cutting are prohibited unless adequate fire and safety precautions have been taken and the procedure has been approved by the Engineer.
- (b) All materials and equipment when not in use shall be placed in approved areas where they will not constitute a hazard to aircraft and not penetrate clearance height restrictions as shown in the CSPP. All equipment shall be parked in the appropriate area(s) when not in use.
- (c) The Contractor shall provide the Safety/Security Manager with a current list of all employees working on the airport. The list shall be maintained current by the Contractor and Subcontractors.
- (d) For emergencies involving life safety (injuries, fires, security breaches, etc.), the Contractor shall immediately call 911 and simultaneously or as soon as possible

contact GYR Airport Operations followed by notification to the Project Manager.

34-5.2 Closed runway and taxiway marking and lighting. Closed runway and taxiway markings shall be as shown in the CSPP. Closed runway and taxiway marking and lighting materials shall be approved for use by the Engineer prior to placement. Construction activities shall not begin until the layout of such marking and lighting has been approved by the Engineer.

34-5.3 Hazard marking. Hazard-marking barricades, flashers, etc. should be used: to identify and define the limits of construction making them visible to aircraft, personnel, or vehicles; to identify hazards such as open manholes, small areas under repair, stockpiled material, waste areas, etc.; to prevent aircraft from taxiing onto a closed runway for takeoff; and to identify FAA, airport, and National Weather Service facilities, cables, power lines and other sensitive areas to prevent damage, interference, and facility shutdown.

Traffic Cones shall not be used at any time on the Air Operations Area.

Hazardous areas, in which no part of an aircraft may enter, should be indicated by the use of barricades marked with diagonal, alternating orange and white reflective stripes. During reduced visibility or night hours, the barricades should be supplemented with flashing red lights. The intensity of the lights and spacing for barricades, flags, and lights should be adequate to delineate the hazardous area without ambiguity. The Contractor shall have a designated person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades.

34-5.4 Construction area marking and lighting. Low profile lights, retroreflective taxiway edge markers, low level barriers, and warning flags shall be provided and erected by the Contractor as shown in the CSPP or as directed by the Engineer. All construction areas, including closed runways and taxiways, should be clearly and visibly separated from active air operation areas. Hazard areas, facilities, cables, and power lines should also be clearly identified by the Contractor. The Contractor is responsible for maintaining the condition and visibility of all markers identifying above-mentioned areas and that marking and lighting aids remain in place. Appropriate barriers, lights and signs should be used as necessary to clearly separate all construction/maintenance areas from other parts of the AOA. All barricades, temporary markers, flag line supports, and other objects placed and left in safety areas on any open runway, taxiway, or taxilane should be: as low as possible to the ground; of low mass; easily collapsible upon contact with an aircraft or any of its components; weighted down or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, or other surface wind currents; and if affixed to the surface, frangible at ground level.

34-5.5 Construction near navigational aids. Construction materials and equipment shall not be placed or parked where they may interfere with the line-of-sight of the ATCT and navigational aids in operation. GYR Operations shall determine if any materials or equipment will cause any type of interference.

34-5.6 Construction site access and haul roads. The Contractor will not be permitted to use any access or haul roads other than those designated on the contract drawings. The Contractor should submit specific proposed ingress and egress routes associated with specific construction activities to the Engineer for evaluation and approval prior to commencing construction activities. Aircraft Rescue and Firefighting (ARFF) right-of-way on access roads, haul roads, taxiways, and runways shall not be impeded at any time.

34-5.7 Trenches and excavations. Gaps or holes between paving lanes, open trenches or excavations are not permitted within an operational runway safety area. Coverings for open trenches or excavations such as reinforced structural steel plates, precast slabs or other methods should be of sufficient strength to meet the requirements of the RSA found in Paragraph 34-5.1(1)(c). Open trenches and excavations at the construction site outside of the RSA should be prominently marked with red or orange flags, as approved by the Engineer, and lighted with red light units during hours of restricted visibility or darkness.

Excavations and open trenches may be permitted up to the edge of structural taxiways provided the drop-off is adequately signed, marked, and lighted and the appropriate NOTAM is issued.

34-5.8 Construction materials stockpiling and equipment storage. There shall not be any equipment storage in the active runway and active taxiway safety areas or in the infield areas. The Contractor shall remove pavers and other equipment from the active Runway and Taxiway Object Free Areas (OFA) including the infields (staging on apron areas will be allowed with prior approval) before re-opening the runway or taxiway. Stockpiled material or equipment should not be stored near aircraft turning areas or operational movement areas, aprons, or excavations and trenches. Stockpiled materials shall not be stored near NAVAIDs, visual or approach aids, nor shall they obstruct the ATCT's line of sight to any runway or taxiway. The Contractor shall ensure that stockpiled construction materials and equipment do not cause degraded or hazardous conditions to airport operations safety. This includes determining and verifying that stockpiled materials and equipment are stored or parked at an approved location, that they are properly stowed to prevent foreign object debris (FOD), attraction by wildlife, or obstruction of air operations either by their proximity to NAVAIDs or to aircraft movement areas.

34-5.9 Other limitations on construction. Open flame welding or torch cutting operations are prohibited unless adequate fire and safety precautions are provided and have been approved for use by the Engineer. Under no circumstances should flare pots be used near aircraft turning areas.

34-5.10 Foreign object debris (FOD) management. Waste and loose materials capable of causing damage to aircraft landing gear or propellers or capable of being ingested in jet engines should not be left or placed on or near active aircraft movement areas. Materials tracked onto these areas should be continuously removed during the construction project. It is also recommended that waste or loose materials which would attract wildlife be carefully controlled and removed on a continuous basis.

34-5.11 Runways and taxiways. Nothing shall be placed upon runways, taxiways, taxilanes, or aprons without authorization from Airport Operations.

34-6.1 Contractor quality control. The Contractor shall be responsible for developing and implementing a Safety Plan Compliance Document including inspections necessary to assure compliance with the requirements of this section and the approved Construction Safety and Phasing Plan.

METHOD OF MEASUREMENT

34-7.1 All items specified in this section will be measured as one lump sum.

34-7.2 Measurement and payment for “Landside Traffic Control” and for Uniform Off-Duty Officer as specified in Section III-2 Technical Special Provision Section 1.1 (if included) is incidental to Special Provision Item 41 Airport Safety and Security (M-003).

BASIS OF PAYMENT

34-8.1 Airport safety and security shall be paid for at the contract lump sum price in a proportionate manner, on the basis of current estimates. This price shall constitute full compensation for furnishing material and equipment, including but not limited to flagpersons, temporary gates, warning markers, temporary drainage items, low level barriers, other traffic control devices and necessary equipment, safety area support material, and other material and equipment list herein, and the maintenance thereof and all other labor, materials, equipment, tools and incidentals including Landside Traffic Control and Uniform off-duty Officers necessary to accomplish this item.

Payment will be made under:

Item SP-34.1 Airport Safety and Security (M-003) – per Lump Sum

35. ADJUST EXISTING STRUCTURE TO FINISHED GRADE

The work under this item shall consist of adjusting existing structures (such as monitoring wells, electrical manholes/handholes, storm drain manholes/inlets, and sanitary sewer manholes) to finished grade in accordance with the locations shown on the plans. The adjustments of the existing structures shall be in accordance with the details shown on the project plans per each structure type.

Measurement and payment for this item shall be made at the contract unit price per each structure adjusted to finished grade or well type converted in accordance with the specifications and accepted by the Engineer. This price shall be full compensation for all labor, materials, and equipment necessary to complete the item.

Payment will be made under:

Item SP-35.1	Raise Existing Utility Vault – per Each
Item SP-35.2	Lower Existing Utility Vault – per Each
Item SP-35.3	Adjust Existing Duct Marker to Grade – per Each
Item SP-35.4	Adjust Existing Monitoring Well to Grade – per Each

36. EXISTING UTILITY RELOCATIONS OR REMOVAL (ALLOWANCE)

The Existing Utility Relocation and Unforeseen Conditions item is provided for the purpose of encumbering funds to cover the costs of utility relocations (monitoring wells, gas lines, water lines, electrical, communication, etc.) or other modifications needed to complete work. This item will be used to relocate any existing utility that is in conflict with the proposed work. It shall be understood that this allowance is an estimate only. It is further understood that authorized work, if any, may be less than the allowance item. The Existing Utility Relocation and Unforeseen Conditions item will be measured and paid for based on the actual costs billed to the project by the utility agency or contractors used to complete the work as deemed necessary by the Owner.

Payment will be made under:

Item SP-36.1 Existing Utility Relocations or Removal (Allowance) – per Allowance

37. PROTECTION OF EXISTING UTILITIES

This item shall consist of protecting existing utilities in the project area. There are existing utilities including electrical lines in the project area including Runway Guard Light circuits. It is estimated that these lines are located XX to 18 inches below the existing finished grade. The Contractor shall hand dig to expose the existing slurry or concrete encasement of these lines. The encasement shall remain intact at the top of the proposed subgrade level. The location of the service lines shall be clearly marked and identified. Heavy equipment traffic shall not be permitted over these lines and the Contractor should use extreme caution when driving any type of equipment over or in the vicinity of these slurry trenches.

All utilities in the project area shall be located and clearly identified in the field. Modifications to the depth of the subgrade compaction will be determined by the Engineer.

Should the Contractor damage or interrupt any operation of any utility service or facility by accident or otherwise, he shall immediately notify the proper authority and the Engineer and he 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 Engineer 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 his 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 to the Contractor or his surety.

There will be no separate measurement or payment for Protection of Existing Utilities, the cost for which shall be considered incidental to other items of work.

38. OVER EXCAVATION OF UNSUITABLE MATERIALS AND BACKFILL WITH SELECT MATERIAL

Work under this item consists of the over excavation of unsuitable material, or undercut excavation, and shall consist of the removal of material that is unsuitable and unsatisfactory for use as subgrade to a depth of one foot below existing grade, or an additional depth as directed by the Engineer. The Contractor shall protect existing utilities while excavating unsuitable material. This material may be made up of rock, hardpan, loose rock, boulders, muck, clay, wet clay and silt or other unsuitable materials.

The quantity of Over Excavation of Unsuitable Materials and Backfill with Select Material shall be the number of cubic yards measured in its original position and authorized to be removed and replaced with the material as ordered by the Engineer. Measurement of Over Excavation of Unsuitable Materials and Backfill with Select Material for payment shall be by the cubic yard of in-place volume of unsuitable material removed.

The quantity shown for bid purposes is a projected amount that could have to be replaced; the actual amount may vary based on the actual field conditions at the time of construction.

For Over Excavation of Unsuitable Material and Backfill with Select Materials, payment shall be made at the unit price per cubic yard. This price shall be full compensation for furnishing all materials (including geotextile fabric), labor, equipment, tools, and incidentals necessary to complete the item. It shall be understood that this allowance is an estimate only. It is further understood that authorized work, if any, may be less than the allowance item. The Over Excavation of Unsuitable Material and Backfill with Select Materials item will be measured and paid for based on the actual costs billed to the project by the contractors used to complete the work that is deemed necessary by the Owner.

Payment will be made under:

Item SP-38.1 Over Excavation of Unsuitable Materials and Backfill with Select Material (Allowance) – per Cubic Yard

39. APPLY HERBICIDE AND PRE-EMERGENT

This item consists of the application of an herbicide prior to clearing, grubbing, and grading; then waiting 30 days for the treatment, and applying a pre-emergent before paving.

After asphalt removal, areas to be paved shall be treated with herbicide according to MAG Specification Section 430 and these special provisions. The Contractor shall wait 30 days prior to completing other work in order to allow the herbicide treatment to take place.

After preliminary grading is completed and the area has been cleared and grubbed, a pre-emergent shall be applied over the entire area, in accordance with the manufacturer's recommendations. Submit Herbicide/Pre-Emergent Application Certificate to the Engineer.

Materials shall conform to MAG Specification 430 and 795. Pre-Emergent shall be a broad-spectrum pre-emergent herbicide in accordance with the US Environmental Protection Agency's (EPA) Group 3 or 21 and in compliance with the manufacturer's recommendations. Contact herbicides and pesticides must comply with all applicable State and Federal laws and be registered with the U.S. Environmental Protection Agency.

Contact herbicides shall be quick acting and permit planting within seven (7) to ten (10) days of their use. Herbicides, insecticides, and fungicides shall be applied in accordance with the manufacturer's recommendations. All other materials used in conjunction with this work shall be furnished by the Contractor and will be considered incidental to the item.

Measurement and payment shall be made by the number of square yards of area of herbicide and pre-emergent applied. The price shall include the furnishing of all required equipment, labor, hauling, materials/parts, tools, and incidentals necessary to complete the work.

Payment will be made under:

Item SP-39.1 Apply Herbicide and Pre-Emergent – per Square Yard

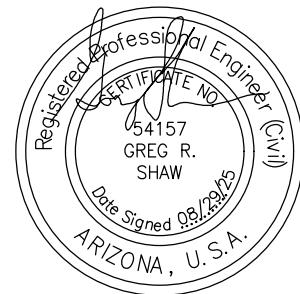
END OF TECHNICAL SPECIAL PROVISION SPECIFICATIONS

SECTION III-C

CIVIL TECHNICAL SPECIFICATIONS

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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 21 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.
- (8) Photographs and/or video

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

- (1) Technical specification item number and description
- (2) Test designation
- (3) Location
- (4) Date of test
- (5) Control requirements
- (6) Test results
- (7) Causes for rejection
- (8) Recommended remedial actions
- (9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

100-10 Corrective action requirements. The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

100-11 Inspection and/or observations by the RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

100-12 Noncompliance.

a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

- (1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or
- (2) Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

100-13 Basis of measurement and payment. Contractor Quality Control Program (CQCP) is for the personnel, tests, facilities and documentation required to implement the CQCP. The CQCP will be paid as a lump sum with the following schedule of partial payments:

- a. With first pay request, 25% with approval of CQCP and completion of the Quality Control (QC)/Quality Assurance (QA) workshop.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 20%.
- d. When 75% or more of the original contract is earned, an additional 20%
- e. After final inspection and acceptance of project, the final 10%.

BASIS OF PAYMENT

100-14 Payment will be made under:

Item C-100 Contractor Quality Control Program (CQCP)

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

102-1.1 General. This project is subject to the terms and conditions of Arizona Pollutant Discharge Elimination System (AZPDES) General Permit No. AZG2020-001 for Storm Water Discharges from Construction Activities. Under the provisions of the AZPDES General Permit, both the City of Phoenix and the Contractor shall be designated as operators, and both must ensure compliance with the terms and conditions of the AZPDES General Permit. AZPDES General Permit No. AZG2020-001 was issued by the Arizona Department of Environmental Quality (ADEQ), became effective on July 1, 2020 and expires at midnight of June 30, 2025.

Work under this item shall consist of preparing all required documents and certifications, performing inspections, and furnishing all materials, labor, and equipment necessary to comply with all requirements of AZPDES General Permit No. AZG2020-001 for Storm Water Discharges from Construction Activities. The work shall also include providing, installing, maintaining, removing and disposing of erosion and sediment control measures such as gravel filter berms, dikes, catch basin inlet protection, end-of pipe filtering devices, silt fences, dams, sediment traps and basins, netting, straw bale barriers, slope drains, and other erosion control devices or methods.

PERMIT REQUIREMENTS

102-2.1 Please note that the terms and conditions of AZPDES General Permit No. AZG2020-001, except to the extent that more explicit or more stringent requirements are written directly into the contract documents, have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.

Both the City of Phoenix and the Contractor are designated as operators of the construction site, and both must complete a Notice of Intent (NOI) to comply with the terms and conditions of AZPDES General Permit No. AZG2020-001 for Storm Water Discharges from Construction Activities. The NOIs must be signed in accordance with the signatory requirements of the AZPDES General Permit, and must contain all required eligibility certifications. The Project Manager for the City of Phoenix will ensure that both the Contractor's and the City's completed and signed NOIs are submitted to the ADEQ. A blank NOI form is attached to these project specifications for use by the Contractor.

It shall be the responsibility of both the City of Phoenix and the Contractor to prepare a joint Storm Water Pollution Prevention Plan (SWPPP) and ensure its compliance with the minimum conditions of the AZPDES General Permit, including measures to protect impaired or unique waters, measures to protect threatened and/or endangered species, and measures to protect properties eligible for protection under the National Historic Preservation Act. The SWPPP must reflect the Contractor's entire scope of activities at the job site as anticipated for the duration of the construction activities. The Contractor must indicate in the SWPPP those changes in job site requirements and/or the order of work performance that will require modifications to the SWPPP, and include those modifications in the SWPPP.

Once completed, it shall be the responsibility of the City of Phoenix to review and approve the joint SWPPP prior to the start of work. The preconstruction conference shall not be held and the Contractor shall not be allowed to start work until the City of Phoenix has approved the SWPPP as being adequate and in accordance with the requirements of the AZPDES General Permit. The City of Phoenix shall approve or not approve the SWPPP within seven (7) calendar days after receipt of the SWPPP from the Contractor for purposes of review. Failure of the Contractor and the City of Phoenix to reach agreement on the adequacy of the SWPPP prior to the preconstruction conference will delay the start of work. The Contractor shall not be entitled to additional compensation for costs that result from such delay in the construction start date.

The SWPPP is not to be submitted to the ADEQ unless directed to do so by the City's Project Manager or in response to a direct request from the ADEQ Director (or authorized representative). If the SWPPP must be submitted to the ADEQ for review and approval, authorization to discharge under the AZPDES General Permit may be withheld by ADEQ for up to thirty-two (32) business days after receipt of the SWPPP.

It shall be the responsibility of the Contractor to implement the SWPPP, and ensure day-to-day compliance with the terms and conditions of the SWPPP and the AZPDES General Permit. The Contractor shall, with the approval of the City's Project Manager, update and revise the SWPPP as necessary throughout the duration of the project to ensure compliance with the AZPDES General Permit requirements.

The Contractor shall retain a copy of the SWPPP and the AZPDES General Permit at a central location on the job site for the use of all operators whenever they are on the construction site. A copy of the signed SWPPP must be retained on the construction site or at another location easily accessible during normal working hours.

All subcontractors and construction site operators having control over only a portion of the construction site shall comply with the requirements of the AZPDES General Permit and the common SWPPP under the supervision of the Contractor. The Contractor shall ensure that all partial site operators having day-to-day operational control of activities necessary to ensure compliance with the SWPPP or other permit requirements submit NOIs to ADEQ as required by the AZPDES General Permit. Subcontractors and partial site operators shall ensure that their activities do not render any other party's pollution prevention plan measures ineffective.

The Contractor shall obtain and incorporate into the SWPPP copies of all NOIs required by the AZPDES General Permit. The Contractor shall ensure that all required documents are complete and accurate, and all required NOIs are received by ADEQ at least two (2) business days before a contractor, subcontractor, or partial site operator is allowed to perform any work at the construction site.

The Contractor shall submit the Contractor's completed and signed NOI form to the ADEQ at the following address:

Arizona Department of Environmental Quality
Water Permits Section/Stormwater NOI (5415 B-3)
1110 West Washington Street
Phoenix, Arizona 85007
Or fax to (602) 771-4674

The Contractor shall provide a copy of the Contractor's completed and signed NOI form to the City's Project Manager at the preconstruction conference. The City's Project Manager shall

ensure that a copy of the Contractor's completed NOI form along with a copy of the City's completed NOI form is incorporated into the SWPPP.

Failure by the Contractor to provide copies of the required completed NOI forms by the time of the preconstruction conference shall cause a delay in the construction start date. The Contractor shall not be entitled to additional compensation for costs that result from such delay in the construction start date.

The Project Manager for the City of Phoenix shall also send copies of the completed NOI forms to:

Development Services Department
City of Phoenix
200 West Washington Street, 3rd Floor
Phoenix, Arizona 85003-1611

The Contractor must submit an amended NOI if ADEQ provides notification that the previously submitted NOI is incomplete. The amended NOI must be submitted to the ADEQ, the City's Project Manager, and if so directed by the City's Project Manager, to the Development Services Department.

The Contractor may assume coverage under the AZPDES General Permit two (2) business days after receipt of the NOI by ADEQ; unless ADEQ provides notification that the NOI needs additional evaluation. Such notification may be made in writing, electronically, by fax, or by phone; and will typically be made within two (2) business days after receipt of the NOI. The Contractor cannot assume coverage under the permit and must delay the start of construction for a period of thirty-two (32) business days after receipt of the NOI by ADEQ, unless additional notice is received from ADEQ during this time period. If there is no additional notice, the Contractor may assume coverage under the AZPDES General Permit and initiate construction activities at the end of the 32 business days.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

102-3.1 The SWPPP must be prepared prior to submitting the NOI to ADEQ for coverage under AZPDES General Permit, and the Contractor must implement the SWPPP as written from the initial commencement of construction activity until final stabilization is complete. The SWPPP must be prepared in accordance with good engineering practice, and must:

- (a) Identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site;
- (b) Identify, describe and ensure implementation of best management practices (BMPs) that will be used to reduce the amount of pollutants in storm water discharges from the construction site;
- (c) Assure compliance with the terms and conditions of AZPDES General Permit No. AZG2020-001 for Storm Water Discharges from Construction Activities; and
- (d) Identify the party responsible for on-site implementation of the SWPPP.

Specific requirements for the contents of the SWPPP include identification of all operators of the project site, and the areas over which each operator has control. The SWPPP must also provide a description of the nature of the construction activity that includes:

- (a) A description of the project and its intended use after the Notice of Termination (NOT) is filed (e.g. a municipal park, a municipal building, high density housing, a city street, a water treatment plant, a municipal airport, etc.);
- (b) A description of the intended sequence of activities that disturb the soil at the site (e.g. grubbing, excavation, grading, utilities, infrastructure installation, etc.);
- (c) The total area of the site, and an estimate of the total area of the site expected to be disturbed by excavation, grading, or other activities, including off-site borrow and fill areas;
- (d) An estimate of the runoff coefficient of the site for both the pre-construction and post-construction conditions, and data describing the soil and any existent data on the quality of any discharge from the site;
- (d) A general location map (e.g. U.S.G.S quadrangle map, a portion of a city or county map, or other map) with enough detail to identify the location of the construction site and the receiving waters within one mile of the site.

The SWPPP must contain a legible site map completed to scale that shows the entire site, and identifies:

- (a) The directions of storm water flow (e.g. use arrows to show which way or ways storm water will flow on, through, and off the site), and the approximate slopes anticipated after major grading activities;
- (b) Areas of soil disturbance and areas of no soil disturbance;
- (c) Locations of structural and non-structural controls identified in the SWPPP;
- (d) Locations where stabilization practices are expected to occur;
- (e) Locations of off-site material, waste, borrow areas, or equipment storage areas;
- (f) Locations of all surface water bodies (including wetlands);
- (g) Locations where storm water discharges to surface water (including dry washes) and to the City's storm sewer system;
- (h) Locations and registration numbers of on-site drywells;
- (i) Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

The SWPPP must identify the nearest receiving water or waters, including ephemeral and intermittent streams, dry sloughs, and arroyos. If applicable, the SWPPP must also identify the areal extent and describe any wetlands near the site that could be disturbed or that could potentially receive discharges from the disturbed areas of the project.

The SWPPP must identify the location and describe any storm water or non-storm water discharges at the site associated with activity other than construction and other pollutant sources, such as fueling operations, on-site material storage areas, waste piles, etc. This includes discharges from dedicated asphalt plants and dedicated concrete plants that are covered by the AZPDES General Permit.

The SWPPP must identify and address off-site storage areas or borrow areas that are used solely for this construction project.

The SWPPP must describe all pollution control measures that will be implemented as part of the construction project to control pollutants in storm water discharges. For each major activity identified

in the project description, the SWPPP must clearly describe appropriate control measures; the general sequence during the construction process when the measures will be implemented; and identify the construction site operator responsible for the implementation of the described control measures.

Off-site material storage areas (including overburden and stockpiles of dirt, borrow areas, etc.) used solely by the Contractor for the permitted construction project are considered a part of the project and must be addressed in the SWPPP.

For purposes of controlling erosion and sediment, the SWPPP must address the following:

- (a) Erosion and sediment controls must be designed to retain sediment on the construction site to the extent practicable.
- (b) All control measures must be properly selected, installed, and maintained per the manufacturer's specifications and good engineering practices. If periodic inspections or information is discovered that indicates a control has been used inappropriately, or installed incorrectly, the Contractor must replace or modify the control for site situations as soon as practicable and before the next anticipated storm event.
- (c) When sediment escapes the construction site, off-site accumulations of sediment must be routinely removed at a frequency sufficient to ensure no adverse effects on water quality.

The SWPPP must describe good housekeeping procedures to prevent litter, construction debris, and construction chemicals exposed to storm water from becoming a pollutant source for storm water discharges.

The SWPPP must include a description of and identify interim and permanent stabilization practices for the construction site, including a schedule of when the practices will be implemented. The SWPPP shall document those areas where existing vegetation will be preserved.

The Contractor must initiate stabilization measures within 14 calendar days in those areas where construction activities have temporarily or permanently ceased, except:

- (a) Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practicable.
- (b) Where construction activity on a portion of the site has temporarily ceased, but earth disturbing activities will resume in that area within the 14 days. In this event, temporary stabilization measures do not have to be initiated on that portion of the site.
- (c) When the site is using vegetative stabilization measures and it is during seasonally arid conditions, vegetative stabilization measures must be initiated as soon as practicable.

The Contractor must maintain the following records as part of the SWPPP:

- (a) Dates when major grading activities occur;
- (b) Dates when construction activities temporarily or permanently cease on a portion of the site;
- (c) Dates when stabilization measures are initiated and completed, and the reasons for any delay.

The SWPPP must describe structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Placement of structural practices in floodplains should be avoided to the degree

attainable. A combination of sediment and erosion control measures is required to achieve maximum pollutant removal. Sediment basins and velocity dissipation devices must be utilized and placed in accordance with Part IV.D.5 of the AZPDES General Permit.

The SWPPP must include a description of post-construction storm water management measures that will be installed during the construction process to control pollutants in storm water discharges after construction operations have been completed. Structural measures shall be placed on upland soils to the degree attainable, and must be designed and installed consistent with applicable City of Phoenix storm water management requirements.

The SWPPP must identify all allowable sources of non-storm water discharges listed in Part I.C.2 of AZPDES General Permit No. AZG2020-001 for Storm Water Discharges from Construction Activities except for flows from fire fighting activities. Non-storm water discharges are to be eliminated or reduced to the extent feasible. The Contractor must implement appropriate best management practices (BMPs) to minimize pollutants in any non-storm water discharges, and must describe those BMPs in the SWPPP. Except if used in emergency firefighting, super-chlorinated wastewaters must be held on-site until the chorine dissipates, or otherwise de-chlorinated prior to discharge.

The SWPPP must describe:

- (a) Measures to prevent the discharge of solid materials, including building materials, to waters of the United States, except as authorized by a permit issued under section 404 of the Clean Water Act;
- (b) Measures to minimize off-site vehicle tracking of sediments, to the extent practicable, and the generation of on-site dust;
- (c) Construction and waste materials expected to be stored on-site with updates as appropriate. The SWPPP must also include a description of the controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, and spill prevention and response practices;
- (d) Any pollutant sources from areas other than construction (including storm water discharges from dedicated asphalt plants, dedicated concrete plants, and/or any other non-construction pollutant sources), with details of controls and measures that will be implemented at those sites to minimize pollutant discharges; and
- (e) Measures to sufficiently stabilize soil at culvert locations to prevent the formation of rills and gullies during construction.

The SWPPP must include a copy of AZPDES General Permit No. AZG2020-001 for Storm Water Discharges from Construction Activities. Copies of the NOIs submitted to ADEQ and/or copies of the certificates received from ADEQ specifying the authorization numbers must also be incorporated into the SWPPP as they become available. If any other agreements with state, federal, or local officials exist that would affect the provisions or implementation of the SWPPP, copies of these agreements must also be included in the SWPPP. (Please note, these types of agreements would include grading and drainage approvals and/or permits, and storm water management approvals and/or permits issued by the City of Phoenix, Development Services Department.)

The SWPPP must be consistent with applicable federal, state, and local requirements for soil and erosion control or storm water management. The SWPPP may incorporate by reference the appropriate elements of soil and erosion or storm water management plans required by other agencies. A copy of these requirements incorporated by reference must be provided as an attachment to the SWPPP, and must be updated as necessary to remain consistent with any revisions made to the requirements by the responsible agency or agencies. Examples of

appropriate requirements include the Phoenix Grading and Drainage Ordinance (Chapter 32A of the Phoenix City Code) and the Phoenix Storm Water Management Ordinance (Chapter 32C of the Phoenix City Code).

A schedule for routine inspections of the construction site must be included in the SWPPP. This schedule must comply with Part IV.H.1 and Part IV.H.2 of the AZPDES General Permit.

The Contractor must sign the SWPPP in accordance with Part VII.K of the AZPDES General Permit. A copy of the signed SWPPP must be retained on the construction site or at another location easily accessible during normal working hours.

SWPPP IMPLEMENTATION AND CONSTRUCTION REQUIREMENTS

102-4.1 The Contractor shall not begin any construction activity until all applicable SWPPP controls, devices, and practices have been put into place.

In accordance with the terms and conditions of the AZPDES General Permit, the Contractor shall post the following documents at the construction site near the main entrance:

- (a) The AZPDES authorization number for the project or a copy of the NOI if an authorization number has not yet been assigned,
- (b) The name and telephone number of a local office or site contact person,
- (c) A brief description of the construction project, and
- (d) The location of the SWPPP if the site is inactive or does not have an on-site location to store the plan, and the name of the contact person for accessing the SWPPP.

The Contractor shall provide adequate and timely maintenance of vegetation, erosion and sediment control measures, and other protective measures and/or best management practices (BMPs) identified in the site plan or SWPPP to ensure that they remain in effective operating condition. Maintenance needs identified through inspections or other means shall be accomplished as soon as practicable and before the next anticipated storm event. If existing protective measures need to be modified or additional measures added, implementation of these changes must be completed before the next anticipated storm event, if practicable. If not practicable, implementation must be completed as soon as it is practicable. Sediment and debris must be removed from sediment traps, sediment ponds, trash racks, and similar structures when the design capacity of the structure has been reduced by fifty (50) percent.

The Contractor shall employ qualified personnel as defined by Part IV.H.3 of the AZPDES General Permit to inspect construction site areas in accordance with the requirements of Part IV.H.4 of the AZPDES General Permit. All inspection results shall be documented in reports that, at a minimum, include:

- (a) The inspection date;
- (b) The name, title, and qualifications of the person or persons performing the inspection. The qualifications must be either on or attached to the report. Alternatively, if the SWPPP documents the qualifications of the person or persons performing the inspection, then that portion of the SWPPP may be referenced;
- (c) The weather information for the period since the last inspection (or since the start of construction if this is the first inspection), including the best estimate of the beginning of each storm event, the duration of each event, the time that has elapsed since the last storm event, and the approximate amount of rainfall for each event in inches;

- (d) The location or locations of discharges of sediment or other pollutants from the site;
- (e) The location or locations and identification of BMPs that need to be maintained, failed to operate as designed, or proved inadequate;
- (f) The location or locations where additional BMPs that do not exist at the time of the inspection need to be implemented;
- (g) Any corrective actions required, including any changes to the SWPPP that are needed, and the dates for implementation;
- (h) Identification of all sources of non-storm water and their associated pollution prevention control measures; and
- (i) Identification of material storage areas, and any evidence of or potential for pollutant discharge from such areas.

The Contractor must retain the inspection reports and any records of follow-up actions taken for a period of at least three (3) years from the date permit coverage expires or is terminated. Inspection reports must identify any instance of non-compliance with the terms and conditions of the AZPDES General Permit. Where no instance of non-compliance is identified, the report must contain a certification that the construction project or site is being operated in compliance with the SWPPP and AZPDES General Permit No. AZG2020-001. The report shall be signed in accordance with Part VII.K of the permit. Copies of all inspection reports shall be provided to the City's Project Manager at least once each month throughout the duration of the project.

Based on the results of the inspection, the Contractor must modify the SWPPP to include additional or modified BMPs designed to correct problems identified. These revisions must be completed within seven (7) calendar days following the inspection. If existing BMPs need to be modified, or if additional BMPs are needed, implementation must be completed before the next anticipated storm event. If implementation before the next anticipated storm event is not practicable, implementation must occur as soon as it is practicable.

The Contractor, with the approval of the City's Project Manager, must amend the SWPPP within fifteen (15) business days whenever:

- (1) There is a change in design, construction, operation, or maintenance at the construction site that has a significant effect on the discharge of pollutants to the waters of the United States, and such effect has not been previously addressed in the SWPPP; or
- (2) Inspections, monitoring (if required), or investigations by the Contractor, the City of Phoenix, state officials, or federal officials determine the discharges are causing or contributing to water quality exceedances, or the SWPPP is ineffective in eliminating or significantly minimizing pollutants in storm water discharges from the construction site.

The SWPPP and all reports required under this contract shall be available to the public in accordance with the requirements of section 308(b) of the Clean Water Act. The Contractor shall make plans and reports available upon request to the ADEQ Director (or authorized representative); State, Tribal, or local agency with approval authority for sediment and erosion control plans, grading plans, or storm water management plans; local government officials; or to the operator of a municipal separate storm sewer receiving discharges from the site in accordance with the terms and conditions of the AZPDES General Permit.

The ADEQ Director (or authorized representative) may notify the Contractor and/or the City of Phoenix at any time that the SWPPP is inadequate, or does not meet one or more of the

requirements of Part IV of AZDES General Permit. Within fifteen (15) business days of receipt of such notification from ADEQ (or as otherwise provided by ADEQ), the Contractor must make the required changes to the SWPPP and submit to the ADEQ a written certification that the requested changes were made and implemented. The ADEQ may request submittal or re-submittal of the SWPPP to verify that all deficiencies have been adequately addressed.

No condition of the AZPDES General Permit or the SWPPP shall release the Contractor from any responsibilities or requirements under any other environmental statutes or regulations, including requirements for the prevention or minimization of the discharge of hazardous substances or oil. If there is a release containing a hazardous substance or oil in an amount equal to or greater than the reportable quantities established under federal regulations that has the potential to impact storm water discharges from this site, the Contractor must report the release to the regulatory agencies in accordance with regulatory requirements. In addition, the Contractor must modify the SWPPP within fourteen (14) calendar days after gaining knowledge of the release to provide a description of the release, the circumstances leading to the release, and the date of the release. The SWPPP must identify measures to minimize and/or prevent the occurrence of such releases, and appropriate measures for responding to such releases. The AZPDES General Permit does not authorize the discharge of any substance resulting from on-site spills, or the discharge of oil or chemicals.

The SWPPP (including a copy of AZPDES General Permit No. AZG003-001) shall be kept on the project site from the date of commencement of construction activities to the date of submittal of the Notice of Termination (NOT). A copy of the SWPPP and the permit shall be retained by the Contractor for a period of at least three (3) years following the date of final stabilization of the construction site. The Contractor shall also retain for the same three-year period all reports required by the AZPDES General Permit and all records of data used to complete the NOI.

It shall be the responsibility of the Contractor to ensure that copies of all documents and records retained by the Contractor in accordance with requirements of the AZPDES permit are also provided to the City's Project Manager.

Within thirty (30) days of the date of final stabilization of the construction site, the Contractor shall submit a completed and properly signed Notice of Termination (NOT) form to the City's Project Manager. The City of Phoenix will also complete a NOT form, and will submit both the Contractor's and the City's NOT to the ADEQ at the address specified on the NOT form; thereby terminating the Contractor's and the City's AZPDES permit coverage for the project. Copies of the NOT will also be sent to those agencies that received a copy of the NOI. A blank NOT form is enclosed with these project specifications for use by the Contractor.

METHOD OF MEASUREMENT

102-5.1 General. The Contractor shall obtain an Earthmoving Permit from the Maricopa County Air Quality Division which must be renewed on an annual basis. The Contractor shall also furnish all labor, equipment and means required to carry out effective measures wherever and as often as necessary to prevent his operations from producing dust in amounts damaging to property, cultivated vegetation and domestic animals, or which would cause a nuisance to persons living or occupying buildings in the vicinity. Airborne dust shall not exceed 20 percent visible emissions as stipulated by Rules 300 and 310 of the Maricopa County Air Pollution Control Rules and Regulations. The Contractor shall be responsible for any damage resulting from any dust originating from activities on or around the excavation sites. Dust abatement measures shall be continued until the Contractor has met the requirements of the County ordinance and is relieved of further responsibility by the Engineer. This dust abatement program shall include provisions to prevent excessive airborne dust in levels determined to be detrimental to aircraft operations by Phoenix Sky

Harbor International Airport and its representatives. Contractor's operations may be halted if aircraft operations are determined to be unsafe. The Contractor shall take the following measures, at a minimum, to control and prevent a dust problem:

1. To control dust on roadways, stockpiles and around the site, the areas shall be treated, as required, with dust suppressants approved by the Aviation Department Environmental Section.
2. Temporary access roads shall be planned so travel on unpaved roads is minimized.
3. Multiple vacuum sweepers shall be required on all paved access roads for dust control.

A Dust Control Plan shall be submitted at the Pre-construction Conference. The plan should include a description of the equipment required, manpower and methods for dust control. Any chemical additives used must be approved by the Aviation Department Environmental Section. The Contractor shall also address in the Dust Control Plan, a method to keep public thoroughfares free of mud, dust and debris at all times.

102-5.2 Site Preparation. The Contractor shall use water trucks at all times to minimize dust to supplement other control measures. The Contractor shall cover trucks when hauling materials, and shall stabilize the surface of stockpiles when not relocating immediately.

102-5.3 Construction. The Contractor shall provide a copy of the Air Quality Management Plan/Dust Control Plan to all adjacent site contractors and subcontractors. The Contractor must also post a copy of the Air Quality Management Plan/Dust Control Plan in a weather resistant location at the construction site where it may be seen by the workers.

The Contractor shall cover trucks when transferring materials and shall use dust suppressants on traveled paths, construction parking and staging areas that are fine grained materials and not paved. The Contractor shall also minimize unnecessary vehicular and machinery activities to reduce dust and shall minimize soil track-out on paved roads and streets by cleaning trucks and equipment before leaving non-paved roads.

102-5.4 Post Construction. The Contractor shall stabilize non-paved areas as required and shall remove unused materials and stockpiles at the end of construction.

BASIS OF PAYMENT

102-6.1 An allowance for the Contractor's participation in the preparation of the Storm Water Pollution Prevention Plan (SWPPP), the implementation of the SWPPP, and the modification of the SWPPP as necessary for compliance with AZPDES General Permit No. AZG2020-001 for the duration of this construction project is included in these contract documents. Payment shall be made monthly with equal payment during the entire construction period with any retention required by the terms and conditions of the construction contract to be paid after filing of the Notice of Termination (NOT).

No separate measurement or direct payment will be made for preparing the Notice of Intent (NOI), the Notice of Termination (NOT), Inspection and Maintenance Reports, or other documentation required to perform the work, the cost being considered as included in the allowance.

Payment will be made under:

Item C-102-6.1 Stormwater Pollution Prevention – per Lump Sum

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 4 percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 Engineer/RPR field office. An Engineer/RPR field office is not required.

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

- 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%.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105 Mobilization

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

Item P-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. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 2 inches. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

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.

c. Repair or Removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

101-3.2 Preparation of Joints and Cracks Prior to Overlay/Surface Treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation

exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed 1/4 inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

Wider cracks (over 1-1/2 inch wide (38 mm)), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	90-100
No. 16 (1.18 mm)	65-90
No. 30 (600 µm)	40-60
No. 50 (300 µm)	25-42
No. 100 (150 µm)	15-30
No. 200 (75 µm)	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the RPR.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inches (+0 to -3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3 Removal of Foreign Substances/Contaminates Prior to Overlay, Seal-Coat, or Remark. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

High-pressure water may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method

to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

101-3.4 Concrete Spall or Failed Asphaltic Concrete Pavement Repair.

a. Repair of Concrete Spalls in Areas to be Overlaid with Asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt Pavement Repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold Milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the 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 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 (30 cm) 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 (2 m) 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 (+0 mm and -6mm) 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 off the airport.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the

pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

- a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.
- b. Repair joints and cracks in accordance with paragraph 101-3.2.
- c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.
- d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

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. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

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 (2 mm) 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-604 or P-605.

101-3.9 Preparation of Cracks in Flexible Pavement Prior to Sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with router or random crack saw by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Crack Sealant. Existing sealants will be removed by routing or random crack saw. Following routing or sawing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Item P-605.

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D1557.

b. Removal of Inlets/Manholes. Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 95% of ASTM D1557, when outside of paved areas must be compacted to 95% of ASTM D698.

c. Not used.

METHOD OF MEASUREMENT

101-4.1 Pavement Removal. The unit of measurement for pavement removal shall be the number of square yards (square meters) 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 Not Used.

101-4.3 Not Used.

101-4.4 Not Used.

101-4.5 Not Used.

101-4.6 Cold milling. The unit of measure for cold milling shall be up to 3 inches of milling per square yard (square meter). 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 Pipe and other Buried Structures. The unit of measurement for removal of pipe and other buried 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.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P-101-5.1	Remove Asphalt Pavement (Full Depth up to 3") - per Square Yard
Item P-101-5.2	Not Used.
Item P-101-5.3	Not Used.

Item P-101-5.4	Not Used.
Item P-101-5.5	Not Used.
Item P-101-5.6	Not Used.
Item P-101-5.7.1	Remove Existing 18" RGRCP – per Linear Foot
Item P-101-5.7.2	Remove of Existing Catch Basin – per Each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

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** shall consist of the cutting and removal of all trees, stumps, brush, logs, hedges, the removal of fences and other loose or projecting material from the designated areas. The grubbing of stumps and roots will not be required. Clearing and grubbing does not include removal of items specifically included under Technical Special Provision Specifications.
- b. **Clearing and grubbing** shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which in the opinion of the RPR is unsuitable for the foundation of strips, pavements, or other required structures, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing.
- c. **Tree Removal** shall consist of the cutting and removal of isolated single trees or isolated groups of trees, and the grubbing of stumps and roots. The removal of all the trees of this classification shall be in accordance with the requirements for the particular area being cleared.

CONSTRUCTION METHODS

151-2.1 General. The areas denoted on the plans to be cleared or cleared and grubbed shall be staked on the ground by the RPR. The clearing and grubbing shall be done at a satisfactory distance in advance of the grading operations.

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. The Contractor shall clear the staked or indicated area of all materials as indicated on the plans. Trees unavoidably falling outside the specified clearing limits must be cut up, removed, and disposed of in a satisfactory manner. To minimize damage to trees that are to be left standing, trees shall be felled toward the center of the area being cleared. The Contractor shall preserve and protect from injury all trees not to be removed. The trees, stumps, and brush shall be cut flush with the original ground surface. The grubbing of stumps and roots will not be required.

Fences shall be removed and disposed of as directed by the RPR. Fence wire shall be neatly rolled and the wire and posts stored on the airport if they are to be used again, or stored at a location designated by the RPR if the fence is to remain the property of a local owner or authority.

151-2.3 Clearing and Grubbing. In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials as indicated on the plans, shall be removed, except where embankments exceeding 3-1/2 feet (105 cm) in depth will be constructed outside of paved areas. For embankments constructed outside of paved areas, all unsatisfactory materials shall be removed, but sound trees, stumps, and brush can be cut off flush with the original ground and allowed to remain. Tap roots and other projections over 1-1/2 inches (38 mm) in diameter shall be grubbed out to a depth of at least 18 inches (0.5 m) below the finished subgrade or slope elevation.

Any buildings and miscellaneous structures that are shown on the plans to be removed shall be demolished or removed, and all materials shall be disposed of by removal from the site. The cost of removal is incidental to this item. The remaining or existing foundations, wells, cesspools, and like structures shall be destroyed by breaking down the materials of which the foundations, wells, cesspools, etc., are built to a depth at least 2 feet (60 cm) below the existing surrounding ground. Any broken concrete, blocks, or other objectionable material that cannot be used in backfill shall be removed and disposed of at the Contractor's expense. The holes or openings shall be backfilled with acceptable material and properly compacted.

All holes in embankment areas remaining after the grubbing operation shall have the sides of the holes flattened to facilitate filling with acceptable material and compacting as required in Item P-152. The same procedure shall be applied to all holes remaining after grubbing in areas where the depth of holes exceeds the depth of the proposed excavation.

METHOD OF MEASUREMENT

151-3.1 Not used.

151-3.2 The quantities of clearing and grubbing as shown by the limits on the plans shall be per lump sum of land specifically cleared and grubbed.

151-3.3 Not used.

BASIS OF PAYMENT

151-4.1 Not used.

151-4.2 Payment shall be made at the contract unit price per lump sum 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.

151-4.3 Not used.

Payment will be made under:

Item P-151-4.1 Clearing and Grubbing – per Lump Sum

END OF ITEM P-151

Item P-152 Excavation, Subgrade, and Embankment

DESCRIPTION

152-1.1 General. This item covers excavation, transportation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, taxilanes, aprons, and intermediate as well as other areas for drainage, airfield electrical backfill, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical section(s) shown on the plans. This item also includes providing materials to stabilize subgrade upon the removal of unsuitable materials.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified Excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature, which is not otherwise classified and paid for as Over Excavation of Unsuitable Material and backfill with approved materials, such as items, P-152-7.2 through P-152-7.4. The unclassified excavation calculated volumes for payment, include all existing pavements, base and subbase materials. All unclassified excavation that is not used in the formation of embankments shall become property of the Contractor, and hauled off-site, and not stockpiled on the Airport.

b. Over Excavation of Unsuitable Material. Over excavation of unsuitable material, or undercut excavation, shall consist of the removal of material that is unsuitable and unsatisfactory for use as subgrade to a depth of one foot below existing grade, or an additional depth as directed by the Engineer. Contractor shall protect existing utilities while excavating unsuitable material. This material may be made up of rock, hardpan, loose rock, boulders, muck, clay, wet clay and silt or other unsuitable materials. Over excavation of unsuitable materials includes the installation of Tensar TriAx® TX160 (or approved equal), then the replacement with select material meeting the requirements of Table 1 of this item or material approved by the Engineer and Airport.

c. Contaminated Soil Removal and Backfill. If contamination is encountered, the Contractor shall suspend that portion of the work and notify the Engineer immediately. Within seven (7) calendar days, the City will determine if the material is hazardous and poses a threat to human health. There shall be no claims made for delay as a result of the determination period or the ensuing contaminated soil excavation. If the material is not deemed hazardous or poses no danger, the City will direct the Contractor to proceed without change. If the material is deemed hazardous and special handling of the material is necessary to accomplish the work, the City will employ an On-Call Contractor to handle the removal and disposal of contaminated soil.

d. Borrow Excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Airport Operations within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable Excavation. Any material containing vegetable or organic matter, such as muck, clay, wet clay and silt, peat, organic silt, sod, grass, brush, or materials containing concrete, tires, petroleum contamination, asbestos, wood, metal or any materials that decompose shall be considered unsuitable for use in embankment construction.

152-1.4 Contractor's Response to Discovery of Suspect Materials. Materials that may be encountered and classified as suspect material may include transite pipe from the removal of existing waterlines. It is the Contractor's responsibility to provide the necessary workers and supervisors qualified to carry out the activities specified in this Contract. The Contractor will direct all of his contract/subcontract operations, which will have the necessary training as outlined in the Contractor's Safety Program. Such monitoring will conform to the requirements of 29 CFR 1910.120 and 29 CFR 1926.58 and will include personnel monitoring when asbestos materials (transite pipe) are identified. The Contractor shall place all asbestos materials into Contractor furnished roll-off containers. The Contractor shall be required to furnish and install wrapping for the roll-off containers, and completely close the wrapping when the roll-off container is full. The City of Phoenix will be responsible for manifest documentation.

MATERIALS

152-2.1 Select Backfill Material. Material designated for select backfill shall have a plasticity index not exceeding eight (8) and shall meet the gradation requirements of Table 1, as follows:

TABLE 1 – Gradation for Select Backfill Materials.

Sieve Size	Percent Passing by Weight
3-inch	100
No. 4	30-85
No. 200	0-25

152-2.2 Geogrid. Geogrid reinforcement material for subgrade applications shall be a bi- or triaxial polymer grid structure (Tensar BX1200, TriAx® TX160 or approved equal), specifically fabricated for use as a subgrade reinforcement. The geogrid shall be one of the following structure types:

A structure comprised of punched and drawn polypropylene or high density polyethylene sheet to form a grid.

- (A) A structure comprised of high density polyethylene or polypropylene extruded to form a grid.

The geogrid shall have high tensile strength and modulus in both principal directions, perpendicular to each other. The geogrid polymer materials shall contain stabilizers or inhibitors or shall be coated or encapsulated to prevent degradation of properties due to ultraviolet light exposure. The polymer shall also be inert to all naturally occurring alkaline and acidic soil conditions.

CONSTRUCTION METHODS

152-3.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be completely cleared in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the Engineer. All unsuitable material shall be transported to and disposed of at an off-site location (landfill) at the time the material is excavated, at no additional cost to the City of Phoenix.

There are no waste areas available on the Airport.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued. At the direction of the Engineer, 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. The City of Phoenix will employ an archaeological representative to monitor excavation and trenching work for the presents of historical or archaeological significance.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, and 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 Engineer, and the Contractor shall arrange for their removal as necessary. The Contractor shall, at his/her own expense, satisfactorily repair or pay the cost of all damage to such facilities or structures which may result from any of the Contractor's operations during the period of the contract.

The Contractor shall take precautions to protect and de-water excavations and subgrade work as necessary, prior to the placement of subbase, stabilized base and pavements.

a. Blasting. Blasting shall not be allowed.

152-3.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the Engineer has obtained elevations and measurements of the ground surface. All suitable excavated material shall be used in the formation of embankment, subgrade, or for other purposes shown on the plans. All unsuitable material shall be disposed of off site (approved landfill) and at the Contractor's expense.

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 shall be disposed of at an off-site location and at the Contractor's expense. There are not any waste areas on the Airport for this project. All excess or surplus materials shall be become the property of the Contractor and removed from the Airport at the time the material is excavated. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

The entire construction site shall be maintained so that the surface is well drained at all times. When necessary, temporary drains and drainage ditches shall be installed to intercept or divert surface water that may affect the work. The Contractor shall provide temporary drainage at no additional cost to the City of Phoenix. Schedule and costs impacts associated with inadequate temporary drainage shall be the Contractor's responsibility.

a. Over Excavation of Unsuitable Material. Rock, hardpan, loose rock, boulders, muck, clay, wet clay and silt or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas shall be excavated to a minimum depth of twelve (12) inches, or to the depth specified by the Engineer, below the subgrade. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be transported to and disposed of at an offsite location (landfill) at the time the material is excavated at no additional cost to the City of Phoenix. This material shall not be temporarily stockpiled. The excavated area shall be backfilled as directed by the Engineer in accordance with section P-152-1.2. All costs incidental to placing in layers, compacting and other necessary undercut and backfill operations shall be included in the respective contract unit prices for Over Excavation of Unsuitable Materials and backfilled with select backfill material.

b. Removal of Utilities. The Contractor will accomplish the removal of existing structures and utilities required to permit the orderly progress of work. See Civil Technical Specification Item P-151, "Clearing and Grubbing". All existing foundations shall be excavated full depth, unless noted

otherwise on the plans, and the material shall be transported and disposed of at an off-site location (landfill) as the material is excavated at no additional costs to the City of Phoenix.

c. Compaction Requirements. The subgrade under areas to be paved shall be compacted to a depth of 6 inches and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D1557. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 6 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698.

The material to be compacted shall be within $\pm 2\%$ of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the $\frac{3}{4}$ inch sieve, follow the methods in ASTM D1557. Tests for moisture content and compaction will be taken at a minimum 1,000 cubic yards of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the Engineer, and density test results shall be furnished upon completion to the Engineer for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the Engineer and the finished subgrade shall be maintained.

For cohesive soils in cut sections, the top six (6) inches of the subgrade shall be compacted to 95 percent maximum density, as determined by ASTM D 1557. For cohesive materials that cannot be compacted to achieve 95 percent of ASTM D 1557, the Contractor will be required to blend these materials with asphalt millings, where the amount of millings will be determined by the Contractor's Quality Control program, and re-compacted to 100 percent of ASTM D 1557. The cost of blending millings and re-compaction will be at no additional costs to the City of Phoenix.

For non-cohesive soils in cut sections, the top six (6) inches of subgrade shall be compacted to 100 percent maximum density and the next eighteen (18) inches of subgrade shall be compacted to 95 percent maximum density, as determined by ASTM D 1557. Material exceeding the compaction requirements of ASTM D 1557 shall be compacted to non-movement with equipment specified for proof rolling. Proof rolling of subgrade shall be performed with a pneumatic-tired rolling equipment, developing a load of 30 to 50 tons. Proof rolling shall only be performed in the presence of the Engineer. In a systematic manner acceptable to the Engineer, the equipment shall perform a minimum of three (3) passes over the designated areas(s). When proof rolling of the subgrade shows an area to be unstable as determined by the Engineer, the unstable material shall be removed and replaced to the limits designated by the Engineer. Removal and replacement shall be in accordance with Section 152-3.2a, Over Excavation of Unsuitable Material.

Non-cohesive soils are defined as material with a plastic index less than 8 and the percent passing a No. 200 sieve less than 30 percent.

The in-place field density shall be determined in accordance with ASTM D 1556 or ASTM D 2167. Stones or rock fragments larger than four (4) inches in their greatest dimension will not be permitted in top six (6) inches of the subgrade. The finished grading operations, conforming to the typical cross section, shall be completed and maintained at least 1,000 feet ahead of the paving operations.

In cuts, all loose or protruding rocks on the back slopes shall be barred loose or otherwise removed to line of finished grade of slope. 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 Engineer.

152-3.3 Borrow Excavation. There are no borrow sources within the boundaries of the airport property. The Contractor shall locate and obtain borrow sources, subject to the approval of the Engineer. The Contractor shall notify the Engineer at least 15 days prior to beginning the excavation so necessary measurements and tests can be made by the Engineer. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

152-3.4 Preparation of Cut Areas of Areas where Existing Pavement has been Removed. In those areas on which a subbase or base course is to be placed, the top six (6) inches of subgrade shall be compacted to not less than 95% of maximum density as determined by ASTM D 1557.

152-3.5 Preparation of Embankment Area. Where an embankment is to be constructed, all sod and vegetable matter shall be removed from the surface upon which the embankment is to be placed, and the cleared surface shall be completely broken up by plowing or scarifying to a minimum depth of six (6) inches. This area shall then be compacted as indicated in Paragraph 152-3.2c.

Where embankments are to be placed on natural slopes steeper than 3 to 1, horizontal benches shall be constructed.

No direct payment shall be made for the work performed under this section. The necessary clearing and the quantity of excavation removed will be paid for under the respective items of work.

152-3.6 Formation of Embankments. Embankments shall be formed in successive horizontal layers of not more than eight (8) inches in loose depth for the full width of the cross section, unless otherwise approved by the Engineer.

The grading operations shall be conducted, and the various soil strata shall be placed, to produce a soil structure as shown on the typical cross sections, or as directed. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Operations on earthwork shall be suspended at any time when satisfactory results cannot be obtained because of rain, freezing, or other unsatisfactory conditions of the field. The Contractor shall drag, blade, or slope the embankment to provide proper surface drainage.

The material in the layer shall be within plus or minus two (+/-2) percent of optimum moisture content before rolling to obtain the prescribed compaction. In order to achieve uniform moisture content throughout the layer, wetting or drying of the material and manipulation shall be required when necessary. Should the material be too wet to permit proper compaction or rolling, all work on all of the affected portions of the embankment shall be delayed until the material has dried to the required moisture content. Sprinkling of dry material to obtain the proper moisture content shall be done with approved equipment that will sufficiently distribute the water. Sufficient equipment to furnish the required water shall be available at all times.

Samples of all embankment materials for testing, both before and after placement and compaction, will be taken for each 1,000 cubic yards. Based on the results of the Contractor's quality control test results, the Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content in order to achieve the correct embankment density. Upon completion of Contractor's acceptable Quality Control test results, quality acceptance testing shall be performed by the City of Phoenix Materials Laboratory.

Rolling operations shall be continued until the embankment is compacted to not less than 95 percent of maximum density as determined by ASTM D 1557.

Under all areas to be paved in fill conditions, the embankments shall be compacted to a density of not less than 95 percent of the maximum density as determined by ASTM D 1557.

The in-place field density shall be determined in accordance with ASTM D 1556 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.

Compaction areas shall be kept separate, and no layer shall be covered by another until the proper density and moisture content is obtained.

During construction of the embankment, the Contractor shall route his/her equipment at all times, both when loaded and when empty, over the layers as they are placed and shall distribute the travel evenly over the entire width of the embankment. The equipment shall be operated in such a manner that hardpan, cemented gravel, clay, or other chunky soil material will be broken up into small particles and become incorporated with the other material in the layer.

In the construction of embankments, layer placement shall begin in the deepest portion of the fill; as placement progresses, layers shall be constructed approximately parallel to the finished pavement grade line.

When rock and other embankment material are excavated at approximately the same time, the rock shall be incorporated into the outer portion of the embankment and the other material shall be incorporated under the future paved areas. Stones or fragmentary rock larger than four (4) inches in their greatest dimensions will not be allowed in the top six (6) inches of the subgrade. Rockfill shall be brought up in layers as specified or as directed and every effort shall be exerted to fill the voids with the finer material forming a dense, compact mass. Rock or boulders shall not be disposed of outside the excavation or embankment areas, except at places and in the manner designated by the Engineer.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in layers of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in layers not exceeding two (2) feet in thickness. Each layer shall be leveled and smoothed with suitable leveling equipment and by distribution of spalls and finer fragments of rock. These type lifts shall not be constructed above an elevation four (4) feet below the finished subgrade.

Where soils are too coarse to be tested by conventional procedures, they shall be compacted using a minimum roller specification. The backfill shall be placed in loose lifts having a thickness not exceeding eight (8) inches. Each lift of embankment or backfill shall be subjected to ten (10) coverages of a vibratory roller with a total static weight of at least 25,000 pounds. The weight of the vibratory portion (including drum, shaft and internal machinery) should be at least 12,000 pounds. The frequency of the vibration during operation should be between 1,100 and 1,500 cycles per minute and the dynamic force at the operating frequency should not be less than 40,000 pounds. The maximum roller speed during operations should be no greater than 1.5 miles per hour. The soil should be thoroughly wetted during the compaction process. The compaction equipment shall be subject to the approval of the City of Phoenix Materials Laboratory.

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

Excess material that is excavated and is not used to form embankment on the project shall be become property of the Contractor and transported and disposed of at an off site location. There are not any waste areas for this material on the Airport site.

152-3.7 Finishing and Protection of Subgrade. After the subgrade has been substantially completed the full width shall be conditioned by removing any soft or other unstable material which will not compact properly. The resulting areas and all other low areas, holes or depressions shall be brought to grade with suitable select material. 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.

Grading of the subgrade shall be performed so that it will drain readily. Schedule impacts and costs incurred due to improper drainage shall be borne by the Contractor. The Contractor shall take all precautions necessary to protect the subgrade from damage. He/she shall limit hauling over the finished subgrade to that which is essential for construction purposes.

All ruts or rough places that develop in a completed subgrade shall be smoothed and re-compacted.

No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been approved by the Engineer for density, moisture, grade and smoothness.

152-3.8 Haul. All hauling will be considered a necessary and incidental part of the work. Its cost shall be considered by the Contractor and included 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.

152-3.9 Tolerances. In those areas upon which a subbase or base course is to be placed, the top of the subgrade shall be of such smoothness that, when tested with a sixteen feet (16') straightedge applied parallel and at right angles to the centerline, it shall not show any deviation in excess of ½-inch, or shall not be more than 0.05-feet from true grade as established by grade hubs. Any deviation in excess of these amounts shall be corrected by loosening, adding, or removing materials; reshaping; and re-compacting by sprinkling and rolling. Hubs shall be placed on each side of every proposed paving pass at forty (40) feet intervals.

On safety areas, intermediate and other designated areas, the surface shall be of such smoothness that it will not vary more than 0.10 foot from true grade as established by grade hubs. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

152-3.10 Stockpiles. Stockpiled Material shall be temporary and is limited as specified in the Special Provision Specification "Stockpiled Material."

CONTRACTOR QUALITY CONTROL

152-5.1 Quality Control Program. The Contractor shall develop a Quality Control Program in accordance with Section 100 of the General Provision Specifications. The program shall address all elements that affect the quality of the embankment(s) being formed.

A P-152 Quality Control Testing Plan shall be developed as part of the Quality Control Program.

152-5.2 Testing Frequency. The Contractor shall establish a minimum testing frequency of one (1) density and moisture test per ASTM D 1556, for each of the following conditions:

- a. For each one thousand (1,000) cubic yards of embankment formed, and;
- b. For each eight (8) inch loose lift.

152-5.3 Quality Control Testing. The Contractor shall perform all quality control tests necessary to control the production and construction processes applicable to this specification and as set forth in the Quality Control Program. The testing program shall include, but not be limited to tests for material density, material moisture content, rolling patterns, and embankment lift thickness.

a. Material Density. The in-place field density shall be determined in accordance with ASTM D 1556 or ASTM D 2167. Nuclear moisture and density methods meeting ASTM D 6938 may be used, provided that at least one (1) out of ten (10) tests are conducted using the ASTM D 1556 method to correlate test results.

b. Material Moisture Content. The material in each layer shall be within plus or minus two (2) percent of optimum moisture content before rolling to obtain the prescribed compaction.

c. Rolling Patterns. Where soils are too coarse to be tested by conventional procedures, they shall be compacted using a minimum roller specification. Each lift shall be subjected to ten (10) coverages with a vibratory roller as specified under "Formation of Embankments" of this section.

d. Embankment Lift Thickness. Embankments and backfill constructed shall be formed in successive horizontal layers of not more than eight (8) inches in loose depth for the full width of the cross section. Samples of embankment materials for quality control testing, both before and after placement and compaction, will be taken for each 1,000 cubic yards.

e. Imported Materials. For materials imported, the Contractor shall submit the name and address of the supplier; approximate amount of material to be imported; location from which the material was excavated or recovered; the gradation and plastic index of the material and a written certification from the material supplier that the borrow material(s) are free of hazardous materials and or substances as defined by local, state and federal environmental regulations. When written certification is not available from the commercial source or the Contractor source that states that the material is free of hazardous materials and/or substances, the Contractor shall arrange for the materials to be tested in accordance with the latest edition of EPA SW846 "Test Methods for Evaluation Solid Waste". Material testing shall include, but not be limited to EPA test methods 8015 petroleum hydrocarbons, 8260 (VOCs), 8270 (SVOCs), 8081/8082 (pesticides/PCBs), 8310 (PAHs), and 6010/7000 series (priority pollutant metals). All sample collections and analysis shall be performed by a state certified laboratory. The Contractor shall submit the material supplier(s) certifications and/or the certified laboratory results in the Quality Control Report for approval prior to importing any borrow materials onto Phoenix Sky Harbor International Airport.

f. Fugitive Dust. The Contractor shall supply and operate all necessary equipment and personnel to meet the requirements for dust control. The Contractor shall document dust control procedures in the daily Quality Control reports.

METHOD OF MEASUREMENT

152-6.1 The quantity of Unclassified Excavation to be paid for shall be the number of cubic yards measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed, nor shall it include excavation for removals of existing improvements, proposed drainage excavation, or any other proposed utility excavation.

152-6.2 The quantity of Over Excavation of Unsuitable Materials and Backfill with Select Material shall be the number of cubic yards measured in its original position and authorized to be removed and replaced with the material as ordered by the Engineer. Measurement of Over Excavation of Unsuitable Materials and Backfill with Select Material for payment shall be by the cubic yard of in-place volume of unsuitable material removed.

The quantity shown for bid purposes is a projected amount that could have to be replaced, the actual amount may vary based on actual field conditions at the time of construction.

152-6.3 Excavation to construct haul roads shall not be measured for payment.

152-6.4 Stockpiled material and temporary stockpiled material shall not be measured for payment.

152-6.5 For payment specified by the cubic yard, volumetric measurement for all excavation shall be computed by a digital terrain model (DTM), by comparing the existing surface terrain to the proposed pavement subgrade terrain. The comparison of the existing surface terrain to the proposed pavement subgrade terrain is that bound by the original ground line established by field survey and the final theoretical pay line established by the cross sections as shown on the plans, subject to verification by the Engineer. The DTM used to calculate the volume of unclassified excavation includes existing asphaltic concrete and Portland cement concrete pavements that are proposed to be removed.

152-6.6 After completion of all excavation operations and prior to the placing of base or subbase material, the final excavation may be verified by the Engineer by means of field cross sections taken randomly at intervals not exceeding 500 linear feet. Final field cross sections may be employed if the following changes have been made:

- a. Plan width of embankments or excavations are changed by more than plus or minus 1.0 foot, or;
- b. Plan elevations of embankments or excavations are changed by more than plus or minus 0.5 foot.

152-6.7 The quantity of Borrow Excavation to be paid for shall be the number of cubic yards of suitable borrow excavation measured in place.

BASIS OF PAYMENT

152-7.1 For Unclassified Excavation payment shall be made at the 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, including stockpiling the material and re-handling as necessary to accommodate the construction phasing and sequencing.

152-7.2 For Over Excavation of Unsuitable Material and Backfill with Select Materials, payment shall be made at the unit price per cubic yard. This price shall be full compensation for furnishing all materials (including geotextile fabric), labor, equipment, tools, and incidentals necessary to complete the item. The amount of the allowance is determined by the Owner and is not subject to individual bid pricing. It shall be understood that this allowance is an estimate only. It is further understood that authorized work, if any, may be less than the allowance item. The Over Excavation of Unsuitable Material and Backfill with Select Materials item will be measured and paid for based on the actual costs billed to the project by the contractors used to complete the work that is deemed necessary by the Owner.

152-7.3 The Unforeseen Soil Conditions item is provided for the purpose of encumbering funds to cover costs of improving poor soil conditions that may be encountered during construction. This item may also be used to repair or modify drainage conditions that are different than anticipated. The amount of the allowance is determined by the Owner and is not subject to individual bid pricing. The Contractor shall incorporate the amount pre-entered in the bid proposal and shall reflect the same in the total amount bid for this project. It shall be understood that this allowance is an estimate only. It is further understood that authorized work, if any, may be less than the allowance item. The

Unforeseen Soil Conditions item will be measured and paid for based on the actual costs billed to the project by the contractors used to complete the work that is deemed necessary by the Owner.

Payment will be made under:

- Item P-152-7.1 Unclassified Excavation – per Cubic Yard
- Item P-152-7.2 Over Excavation of Unsuitable Materials and Backfill with Select Material – per Allowance
- Item P-152-7.3 Unforeseen Soil Conditions (Allowance) – per Allowance

TESTING REQUIREMENTS

ASTM D 698	Test for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-pound Rammer and 12-inch drop
ASTM D 1556	Test for Density of Soil In Place by the Sand-Cone Method
ASTM D 1557	Test for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 10-pound Rammer and 18-inch Drop
ASTM D 2167	Test for Density and Unit Weight of Soil In Place by the Rubber Balloon Method
ASTM D 6938	In-place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods
EPA SW846	Test Methods for Evaluating Solid Waste
EPA 8240/8270	Volatile Organic Compounds
EPA 8080	Pesticides and PCB's
EPA 6010/7000	Priority Pollutant Metals

END OF ITEM P-152

Item P-153 Controlled Low-Strength Material (CLSM)

DESCRIPTION

153-1.1 This item shall consist of furnishing, transporting, and placing a controlled low-strength material (CLSM) as flowable backfill in trenches or at other locations shown on the plans or as directed by the Resident Project Representative (RPR).

MATERIALS

153-2.1 Materials.

- a. **Cement.** Cement shall conform to the requirements of ASTM C150 Type II.
- b. **Fly ash.** Fly ash shall conform to ASTM C618, Class C or F.
- c. **Fina aggregate (sand).** Fine aggregate shall conform to the requirements of ASTM C33 except for aggregate gradation. Any aggregate gradation which produces the specified performance characteristics of the CLSM and meets the following requirements, will be accepted.

Sieve Size	Percent Passing by Weight
3/4 inch	100
No. 200	0 – 12

- d. **Water.** Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

MIX DESIGN

153-3.1 Proportions. The Contractor shall submit, to the RPR, a mix design including the proportions and source of aggregate, fly ash, cement, water, and approved admixtures. No CLSM mixture shall be produced for payment until the RPR has given written approval of the proportions. The proportions shall be prepared by a laboratory and shall remain in effect for the duration of the project. The proportions shall establish a single percentage or weight for aggregate, fly ash, cement, water, and any admixtures proposed. Laboratory costs are incidental to this item.

- a. **Compressive strength.** CLSM shall be designed to achieve a 28-day compressive strength of 100 to 200 psi (690 to 1379 kPa) when tested in accordance with ASTM D4832, with no significant strength gain after 28 days.
- b. **Consistency.** Design CLSM to achieve a consistency that will produce an approximate 8-inch (200 mm) diameter circular-type spread without segregation. CLSM consistency shall be determined per ASTM D6103.

CONSTRUCTION METHODS

153-4.1 Placement.

- a. **Placement.** CLSM may be placed by any reasonable means from the mixing unit into the space to be filled. Agitation is required during transportation and waiting time. Placement shall be performed so structures or pipes are not displaced from their final position and intrusion of CLSM into unwanted areas is avoided. The material shall be brought up uniformly to the fill line shown on the plans or as directed by the RPR. Each placement of CLSM shall be as continuous an operation as possible. If CLSM is placed in more than one lift, the base lift shall be free of surface water and loose foreign material prior to placement of the next lift.
- b. **Contractor Quality Control.** The Contractor shall collect all batch tickets to verify the CLSM delivered to the project conforms to the mix design. The Contractor shall verify daily that the CLSM is consistent with 153-3.1a and 153-3.1b. Adjustments shall be made as necessary to the proportions and materials as needed. The Contractor shall provide all batch tickets to the RPR.
- c. **Limitations of placement.** CLSM shall not be placed on frozen ground. Mixing and placing may begin when the air or ground temperature is at least 35°F and rising. Mixing and placement shall stop when the air temperature is 40°F and falling or when the anticipated air or ground temperature will be 35°F or less in the 24-hour period following proposed placement. At the time of placement, CLSM shall have a temperature of at least 40°F.

153-4.2 Curing and protection.

- a. **Curing.** The air in contact with the CLSM shall be maintained at temperatures above freezing for a minimum of 72 hours. If the CLSM is subjected to temperatures below 32°F, the material may be rejected by the RPR if damage to the material is observed.
- b. **Protection.** The CLSM shall not be subject to loads and shall remain undisturbed by construction activities for a period of 48 hours or until a compressive strength of 15 psi (105 kPa) is obtained. The Contractor shall be responsible for providing evidence to the RPR that the material has reached the desired strength. Acceptable evidence shall be based upon compressive tests made in accordance with paragraph 153-3.1a.

153-4.3 Quality Assurance (QA) Acceptance. CLSM QA acceptance shall be based upon batch tickets provided by the Contractor to the RPR to confirm that the delivered material conforms to the mix design.

METHOD OF MEASUREMENT

153-5.1 Measurement. No separate measurement for payment shall be made for controlled low strength material (CLSM). CLSM shall be considered necessary and incidental to the work of this Contract.

BASIS OF PAYMENT

153-6.1 Payment. No payment will be made separately or directly for controlled low strength material (CLSM). CLSM shall be considered necessary and incidental to the work of this Contract.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C150	Standard Specification for Portland Cement
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D4832	Standard Test Method for Preparation and Testing of Controlled Low-Strength Material (CLSM) Test Cylinders
ASTM D6103	Flow Consistency of Controlled Low Strength Material (CLSM)

END OF ITEM P-153

Item P-403 Asphalt Mix Pavement

DESCRIPTION

403-1.1 This item shall consist of a surface course composed of mineral aggregate and bituminous materials mixed in a central mixing plant and placed on a prepared course in accordance with MAG Section 321 and 710 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 sections, and elevations required by the plans and shall be rolled, finished, and approved before the placement of the next course.

MATERIALS AND MANUFACTURER

403-2.1 General. Materials and manufacture shall conform to MAG Section 710 for the type specified, except as specified in this specification.

403-2.2 Job Mix Formula. The job mix formula for the mixes shall meet the requirements of City of Phoenix Supplement Section 321 and MAG Section 710 for the D-1/2" Marshall Mix Design. The asphalt binder shall be PG 70-10.

403-2.3 Recycled Asphalt Concrete. Recycled Asphalt Pavement (RAP) will not be allowed on this project.

403-2.4 Test Section. Prior to full production, the Contractor shall prepare and place a quantity of bituminous mixture according to the job mix formula. The amount of mixture shall be sufficient to construct a test section 300 feet long and 20 feet wide, placed in two lanes, with a longitudinal cold joint, and shall be of the same depth specified for the construction of the course which it represents. A cold joint is an exposed construction joint at least 4 hours old or whose mat has cooled to less than 1600 F. The underlying grade or pavement structure upon which the test section is to be constructed shall be the same as the remainder of the course represented by the test section. The equipment used in construction of the test section shall be the same type and weight to be used on the remainder of the course represented by the test section.

The test section shall be evaluated for acceptance as a single lot in accordance with the acceptance criteria set in section 403-4.1. The test section shall be divided into equal sublots. As a minimum, the test section shall consist of 3 sublots.

The test section shall be considered acceptable if the average mat and joint density of the test section is greater or equal to 95 percent. If the initial test section should prove to be unacceptable, the necessary adjustments to the job mix formula, plant operation, placing procedures, and/or rolling procedures shall be made. A second test section shall then be placed. If the second test section also does not meet specification requirements, both sections shall be removed at the Contractor's expense. Additional test sections, as required, shall be constructed and evaluated for conformance to the specifications. Any additional sections that are not acceptable shall be removed at the Contractors' expense. Full production shall not begin until an acceptable section has been constructed and accepted in writing by the Engineer. Once an acceptable test section has been placed, payment for the initial test section and the section that meets specifications requirements shall be made in accordance with section 403-7.1.

Job mix control testing shall be performed by the Contractor at the start of plant production and in conjunction with the calibration of the plant for the job mix formula. If the aggregates produced by the plant do not satisfy the gradation requirements of produce a mix that does not meet JMF the JMF, it will be necessary to reevaluate and redesign the mix using plant-produced aggregates. Specimens shall be prepared and the optimum bitumen content determined in the same manner as for the original design tests

CONSTRUCTION METHODS

403-3.1 Weather and Moisture Conditions. Asphalt concrete shall be placed only when the surface is dry, and when the atmospheric temperature in the shade is forty degrees Fahrenheit (40°F) or above. Asphalt Concrete for surface course which is less than two inches (2-inches) in thickness shall be placed only when the surface is dry, and when the surface temperature is equal to or greater than fifty degrees Fahrenheit (50°F).

No asphalt concrete shall be placed when the weather is foggy or rainy, or when the base on which the material is to be placed contains moisture in excess of the optimum. Asphalt concrete shall be placed only when the Engineer determines weather conditions are suitable.

403-3.2 Application of Tack Coat. If the Contractor places multiple layers of asphaltic concrete pavement, a tack coat shall be applied to all existing or new bituminous surface prior to the placing of a succeeding layer of bituminous mixed material. The preparation, material, and application of tack coat shall comply with MAG Standard Specifications 329, 330, 333 & 713.

The same material that is specified above for the tack coat shall be applied to the vertical surfaces of existing pavements, curbs, and gutters, against which asphalt concrete is to be placed. The surface to be covered may require repair or patching as directed by the Engineer.

There shall be no separate measurement or payment for the application of any tack coat, but shall be considered incidental to the associated item of work.

403-3.3 Placing, Spreading, and Finishing. Asphalt concrete shall be delivered and placed within the job mix formula limits specified in MAG Section 710, unless otherwise shown within this specification. Tarpaulins shall be furnished and used to cover all loads during transportation if delivered temperature of the mixture is below two hundred-sixty degrees Fahrenheit (260°F). The temperature shall be taken by the Contractor's Quality Control personnel, at a point six inches (6-inches) below the exposed surface of the material, in the truck, on the job site, and just prior to placement. When releasing agents are placed in the truck beds, no free fluid shall be present in the truck bodies at the time of asphalt concrete is loading. Diesel fuel shall not be used as a releasing agent.

The handling of the completed mixture shall at all times be such as to prevent segregation, and the material as spread shall be free from areas of excess course or fine material. Float rock developed in the process of raking shall be placed on an underlying course or otherwise disposed of. In no case shall it be scattered over the surface of a final course.

Placement shall begin on pavement at points farthest from the source of supply, and progress continuously toward the source of supply, unless otherwise ordered by the Engineer, and no more than one-half (1/2)-day's delivery to the project shall be placed in any one lane in advance of other lanes. Transverse joints in adjacent lanes shall be offset a minimum of ten (10) feet.

At locations where the mixture is to be placed over areas inaccessible to the required spreading or compacting equipment or over areas where the use of the required spreading and compacting equipment would not be practicable, the mixture may be spread or compacted by other means approved by the Engineer.

a. Base Preparation. The base on which the asphalt concrete is to be placed shall be prepared by the Contractor per Civil Technical Specification P-152.

b. Spreading and Finishing Equipment. Self-propelled mechanical spreading and finishing equipment shall be provided with a vibrating screed or strike off type of assembly capable of distributing not less than the full width of a paving lane or trench width. The term screed includes any strike-off device which operates by cutting, crowding, or other practical action which is effective on mixtures at workable temperatures without tearing, shoving, or gouging, and which will produce a finished surface of the smoothness and texture required. The screed shall be adjustable to the required template and elevation. The forward speed of operation of mechanical spreading and finishing equipment shall be so regulated so no irregularities will result in the surface texture or smoothness of the mat due to excessive forward speed of the spreading machine. The forward speed of operation shall not exceed fifty-five (55) feet per minute, unless the Contractor can demonstrate to the satisfaction of the Engineer higher speeds will not affect the smoothness of the mat.

All material within the mechanical spreading and finishing equipment shall be handled to prevent segregation of the aggregate. This includes but is not limited to devices such as augers, screws or slat conveyors. These devices shall extend to the final or termination point where the material is being transported within the equipment. If any of the devices fail to function, the paving operation shall be terminated immediately until repairs are completed. In the case of the screed, auger extensions and vibrators shall be installed wherever the screed is extended more than one (1) foot beyond the end of the base auger or auger extension. However, when placing material against an extremely uneven edge over a short distance, the Engineer may waive the auger extensions and vibrators.

Self-propelled mechanical spreading and finishing equipment shall be equipped with control system capable of automatically maintaining the screed elevation as specified herein.

The control system shall be automatically actuated from a laser system of mechanical sensors or sensor directed mechanisms or devices which will maintain the paver screed at a predetermined transverse slope and at the proper elevation to obtain the required surface. The transverse slope controller shall be capable of maintaining the screed at the desired slope within plus or minus 0.1 percent. When directed by the Engineer, the transverse slope control system shall be made inoperative and the screed shall be controlled by sensor directed automatic mechanisms which will independently control the elevation of each end of the screed from reference lines or surfaces.

When trucks are backed into the self-propelled mechanical spreading and finishing equipment, it shall be in such a manner that the equipment will not be jarred excessively or moved out of line. Once in position, the truck shall be securely attached to the equipment during spreading and finishing.

When the Engineer deems that the automatic screed control operation is not practical under a particular set of conditions, he/she may order the use of manual control in lieu thereof. However, the machine shall be equipped with the automatic device.

Use of the spreader boxes will be permitted by the Engineer only in writing, under certain conditions, such as in narrow paving projects where it is not practical to use self-propelled equipment. The spreader box will be equipped with a readily adjustable strike off blade. In order to obtain a smooth surface manipulation of the controls of the spreader box shall be held to a minimum. Trucks shall be backed into the spreader box in such a manner that the box will not be jarred excessively or moved out of line and the trucks shall be securely attached to the spreading and finishing.

The asphaltic concrete materials shall not be placed with a self-propelled pneumatic tired blade grader.

c. Compaction Equipment. All rollers used in compaction of asphalt concrete shall be self-propelled and reversible, with a minimum weight of eight (8) tons. All rollers shall be maintained to insure smooth operation in respect to steering, the ability to stop, start and reverse. All rollers shall be equipped with an automatic device or devices capable of properly dispensing an approved releasing agent on the wheels to prevent the wheels from picking up the asphalt concrete. Diesel fuel shall not be used as a releasing agent. All rollers shall be equipped with scrapers to keep the wheels clean from asphalt and other debris.

Pneumatic-tired rollers shall be of the two (2)-axle tandem type having a rolling width of not less than five (5) feet. All tires shall not be less than twenty (20) inches in diameter, shall be of the same size and shall have treads satisfactory to the City of Phoenix. The roller shall be so constructed that the operating weight per tire shall not be less than two thousand (2,000) pounds and the tires shall be spaced so that the entire gap between adjacent tires will be covered by the tread of the following tire. Except as otherwise specified, each tire shall be inflated to ninety (90) psi and at all times the air pressure in each tire shall not vary more than five (5) psi from the specified pressure. Pneumatic-tired rollers shall be equipped with skirt-type devices mounted around the tires so that the temperature of the tires will be maintained during the rolling process.

Steel-wheeled tandem rollers or steel-wheeled vibratory rollers shall also be used for final compaction of the new asphalt surface course. In all cases, the larger of the two roller wheels will be operated in the forward position. The steel wheels shall be straight, free from grooves and/or pits. Vibratory rollers shall be operated in accordance with standard practices and manufacturer recommendations.

d. Asphalt Surface Course. Asphalt surface course (MAG D-1/2) shall be spread and finished by means of mechanical spreading and finishing equipment as described and specified above, except as otherwise noted. The compacted thickness of layers placed shall be as shown on the plans, but in no case shall the compacted thickness of each lift be below 2 inches or exceed 2-1/2 inches.

When more than one (1) course is placed, longitudinal joints of each course shall be staggered not less than one (1) foot with relation to the longitudinal joints of the underlying course. Transverse joints in adjacent lanes shall be offset a minimum of ten (10) feet.

Before another course is placed adjacent to cold transverse construction joint, the joint shall be trimmed to a vertical face by saw cutting the material back to its full depth to expose a fresh surface. The joint shall be cut on a ten-degree (10°) to fifteen-degree (15°) skew from a line perpendicular to the center line of the paveway. The joint formed when the fresh mixture is placed shall be dense and well sealed. The transverse surface joints shall be tested with a sixteen (16)-foot straightedge and shall conform to the requirements herein for surface smoothness. For short overnight intermissions in paving, a full depth bulkhead (e.g., wooden member) can be placed near the end of the day's pavement. The bulkheads and excess material will be removed just prior to the placement of the following day's pavement.

An approved joint heater shall be used on cold transverse or longitudinal joints where conditions are such that it is deemed necessary by the Engineer. The joint heater shall be capable of heating the joint to a minimum temperature of two hundred degrees Fahrenheit (200°F).

Emulsified asphalt shall be applied to the exposed edge before new pavement is placed against the joint. The application of an emulsified bituminous material shall be in accordance with MAG Specifications Section 329 and 713. The bituminous tack coat shall meet the requirements of SS-1 per MAG Specification 713.

Sufficient rolling equipment shall be furnished to satisfactorily compact and finish the amount of mixture being placed. However, there shall be a minimum of two (2) rollers with two (2) operators on the project at all times. Upon direction of the Engineer, one of the rollers may be a pneumatic-tire roller. During rolling operations, the speed of the roller(s) shall not exceed 3 miles per hour. If an ample number of rollers are not present, the Contractor shall adjust the asphalt placement rate to accommodate the roller(s) speed. The type and required number of rollers shall be on the project and in acceptable operating condition, prior to the placement of any asphalt material. All rollers shall be operated continuously from the breakdown through finish rolling. The Contractor may use vibratory rollers in lieu of the steel-wheeled roller, however when the thickness of the asphalt is one inch (1- inch) or less, all rolling will be done in the static mode.

When more than one width of asphalt concrete material will be placed, a six inch (6-inch) strip adjacent to the area on which future material is to be laid shall not be rolled until such material has been placed but shall not be left unrolled more than two (2) hours after being placed, unless the six (6)-inch unrolled strip is first heated with a joint heater. After the first strip or width has been compacted, the second width shall be placed, finished and compacted as provided for the first width, except that rolling shall be extended to include the six inches (6-inches) of the first width not previously completed.

At any place not accessible to the roller, the mixture shall be thoroughly compacted with tampers and finished, where necessary, with a hot smoothing iron to provide a uniform and smooth layer over the entire area compacted in this manner.

Breakdown rolling shall begin as soon as the mixture will bear the roller without undue displacement. Rolling shall be longitudinal, overlapping on successive trips by at least thirty-four percent (34%) but not more than the width of the rear wheels. Alternate trips of the roller shall be of slightly different lengths. The motion of the roller shall at all time be slow enough to avoid displacement of the mixture.

Breakdown and compaction rolling shall be done by either steel-wheel or pneumatic-tire rollers. The City of Phoenix may require a pneumatic-tire roller for one of the rolling operations. Rolling shall continue until the specific gravity of the compacted mixture is not less than ninety-five percent (95%) of the specific gravity of specimens composed of the same materials in similar proportions or composed of the same mixture compacted in the laboratory by the seventy-five (75) blow method of AASHTO T-245 if the mix was designed by the Marshall method.

Finish rolling shall be done by means of steel-wheeled roller or a vibratory steel-wheel roller operated in the static mode.

The completed surfacing shall be thoroughly compacted, smooth and true to grade and cross-section and free from ruts, humps, depressions or irregularities. The surface shall not vary by more than one-quarter (1/4)-inch from the lower edge of a sixteen (16)-foot straightedge when the straightedge is placed parallel to grade breaks, and shall not vary by more than three-eighths (3/8)- inch from the lower edge of a sixteen (16)-foot straightedge when the straightedge is placed perpendicular, or in any other direction. This straightedge smoothness requirement applies to aprons, Taxiways, service roads, and other paved surfaces. The straightedge shall be furnished by the Contractor and shall be acceptable to the Engineer.

All areas paved shall be water tested by the Contractor for drainage in the presence of the City of Phoenix or designated representative before final acceptance. Any areas not draining properly shall be corrected to the Engineer's satisfaction at the Contractor's expense. Water for this testing shall be provided and paid for by the Contractor.

When deviations in excess of the above tolerance are found, humps or depressions shall be corrected to meet the specified tolerance or shall be saw cut out along neat straight lines and

replaced with fresh hot mixture and thoroughly compacted to conform with and bond to the surrounding area. Materials and work necessary to correct such deviations shall be at no additional cost to the City of Phoenix.

MATERIAL ACCEPTANCE

403-4.1 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.

c. 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 (6 mm) 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. The cost of additional corrective and investigative actions shall be borne entirely by the Contractor. Thickness of the cores shall be determined by the RPR, and by using the average caliper measurement.

Where the pavement is deficient in thickness by more than one-quarter (1/4)-inch but not more than one-half (1/2) inch, payment will be reduced per Table 1 below.

TABLE 1. PAVEMENT THICKNESS PAYMENT REDUCTION, ASPHALT CONCRETE

Specified Mat Thickness	Reduction in Payment
Less than 1.50"	50%
1.50" to 1.99"	33%
2.00" to 2.49"	25%
2.50" to 2.99"	20%
3.00" and Over	17%

When the deficiency of the pavement thickness exceeds 1/2-inch, the pavement shall be milled and overlaid on the area affected, but in no case less than the area that was cored, for the full width of pavement, with a new mat of material, equal in thickness to the deficiency but not less than one- and-one-half (1-1/2) inches in any instance. This is to be done at no additional cost to the City of Phoenix.

(i) Sampling. The Contractor will cut minimum 5 inches diameter samples in accordance with ASTM D 5361. The Contractor shall furnish all tools, labor, and materials for cleaning and filling the cored pavement. Laitance produced by the

d. Density. Nuclear densities shall be taken per ASTM D 2950 for acceptance. A minimum of eight (8) nuclear density tests per shift's production shall be taken. If the average density falls below ninety-five percent (95%) then two (2) cores shall be taken by the Contractor, as directed by the RPR, to determine final density for that shift's production.

TABLE 2. PAVEMENT DENSITY PAYMENT REDUCTION, ASPHALTIC CONCRETE

Deviation Below Specification	Reduction in Payment
2% points	2%
2 to 3% points	5%
3 to 5% points	10%

e. Asphalt Cement Content. When the asphalt cement content exceeds the limits established in MAG Section 405-2.2, two (2) additional core tests will be made for each deficient test taken, and the average of all three (3) tests made shall be used to determine the asphalt cement content.

When the asphalt cement content is in excess of that permitted, the Contractor shall remove any areas of bleeding, but in no case less than the specified roller width, as directed by the Engineer, and replace the affected material with new material meeting the specification requirements for the mix type involved. This shall be done, any time within a period of one (1) year until the bleeding has been corrected, at no additional cost to the City of Phoenix. Should the stability of the mix be affected by the excess asphalt cement to such an extent that the pavement is displaced under normal traffic loads, within a period of one (1) year, the areas affected shall be removed and replaced with new material, at no additional cost to the City of Phoenix.

When the asphalt cement content deviates from 0.0 to 0.2 percent (%) points, weight of the total mixed material less than the minimum permitted in this specification, then payment to the Contractor for asphalt concrete pavement will be reduced per Table 3 below.

TABLE 3. ASPHALT CEMENT CONTENT PAYMENT REDUCTION, ASPHALTIC CONCRETE

Deviation from that Permitted	Payment Reduction
0.0 to 0.1% points	3%
Over 0.1 to 0.2% points	5%
Greater than 0.2% points	25%

The above corrective work, due to deviations from the requirements for asphalt content, shall be done at no additional cost to the City of Phoenix.

f. Mineral Aggregate. When the mineral aggregate gradation deviates from the requirements of this specification in an amount which, in the opinion of the Engineer, will affect the stability or durability of the mix, the Contractor shall remove the asphalt concrete and replace it with material meeting the requirements of this specification.

If the results from a single acceptance sample fall outside the acceptance limits in COP Supplements to MAG Section 321, Table 321-3, a second sample shall be taken. If the second sample also falls outside the acceptance limits, the Contractor may, at its discretion, cease asphalt concrete production and resume after calibration test results confirm that adjustments to materials or proportions result in a gradation fall within the acceptance limits of Table 321-3, or consider using a different approved plant that meets all acceptance criteria.

The above corrective work, due to deviations from the requirements for mineral aggregate, shall be done at no additional cost to the City of Phoenix.

CONTRACTOR QUALITY CONTROL

403-5.1 General. The Contractor shall develop a Quality Control Program in accordance with Technical Provisions Section 100. The program shall address all elements that affect the quality of the pavement including, but not limited to:

- a. Mix Design
- b. Aggregate Grading
- c. Quality of Materials
- d. Stockpile Management
- e. Proportioning
- f. Mixing and Transportation
- g. Placing and Finishing
- h. Joints
- i. Compaction and density
- j. Surface smoothness

403-5.2 Testing Laboratory. The Contractors' laboratory used to develop the job mix formula shall meet the requirements of ASTM D 3666 including the requirement to be accredited by a national authority such as the National Voluntary Laboratory Accreditation Program (NVLAP), the American Association for Laboratory Accreditation AALA) or AASHTO Accreditation Program (AAP). A certification signed by the manager of the laboratory stating that it meets these requirements shall be submitted to the City of Phoenix prior to the start of construction. The certification shall contain as a minimum:

- a. Qualifications of personnel; laboratory manager, supervising technician, and testing technicians
- b. A listing of equipment to be used in developing the job mix.
- c. A copy of the laboratory's quality control system.
- d. Evidence of participation in the AASHTO Materials Reference Laboratory (AMRL) program
- e. Evidence the laboratory is accredited, for the test methods required herein, by a nationally recognized laboratory accreditation organization.

403-5.3 Quality Control Testing. The Contractor shall perform all quality control tests necessary to control the production and construction processes applicable to these specifications and as set forth in the MAG specs.

403-5.4 Sampling. 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.

METHOD OF MEASUREMENT AND PAYMENT

403-6.1 Measurement. Asphaltic concrete pavement for MAG D-1/2" asphaltic concrete surface course, (to the depths shown within the typical sections in the plans), will be measured by the Ton, computed to the nearest Ton, for the mixture actually used as allowed above. No separate measurement will be made for the required quantities of mineral aggregates, filler material, asphalt cement and sand. Weighmaster's Certificates shall be provided by the Contractor. The weighing shall be done on certified platform scales sealed by the State Inspector as defined by ARS Sections 4/"2112 and 44- 2116. The Contractor shall furnish the Engineer with duplicate weighmaster's certificates showing the actual net weights together with the information required by ARS Section 44-2142.

The price per square ton for MAG D-1/2" Asphalt Concrete Pavement surface course shall include the cost of the asphalt cement in the percentages as specified in these specifications.

BASIS OF PAYMENT

403-7.1 Payment. The asphalt concrete measured as provided above will be paid for at the contract price per Ton, (to the depths shown within the typical sections in the plans), and that price shall be full compensation for the item complete, as herein described and specified. The price shall be compensation for furnishing all materials, including bituminous material, for all preparation, mixing, transportation and placement of these materials, and for all labor, equipment, tools and incidentals necessary to complete the item. No separate payment will be made for corrective work. No payment will be made for any overrun in quantity of asphaltic concrete in excess of ten percent (10% based on actual field measurement of area covered, design thickness, and a unit weight of one hundred-fifty (150) pounds per cubic foot).

Payment will be made under:

Item P-403-7.1 Asphalt Concrete Pavement (MAG D-1/2-Inch) – per Ton

TESTING REQUIREMENTS

ASTM C 29	Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C 88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C 117	Materials Finer than 75 um (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 127	Specific Gravity and Absorption of Coarse Aggregate
ASTM C 131	Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C 136	Sieve Analysis of Fine and Coarse Aggregates
ASTM C 183	Sampling and the Amount of Testing of Hydraulic Cement

ASTM C 566	Total Evaporable Moisture Content of Aggregate by Drying
ASTM D 75	Sampling Aggregates
ASTM D 979	Sampling Bituminous Paving Mixtures
ASTM D 995	Mixing Plants for Hot-Mixed Hot-Laid Bituminous Paving Mixtures
ASTM D 1073	Fine Aggregate for Bituminous Paving Mixtures
ASTM D 1074	Compressive Strength of Bituminous Mixtures
ASTM D 1188	Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens
ASTM D 1461	Moisture or Volatile Distillates in Bituminous Paving Mixtures
ASTM D 2041	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D 2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D 2419	Sand Equivalent Value of Soils and Fine Aggregate
ASTM D 2489	Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures
ASTM D 2726	Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
ASTM D 2950	Density of Bituminous Concrete in Place by Nuclear Methods
ASTM D 3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D 3665	Random Sampling of Construction Materials
ASTM D 3666	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
ASTM D 4125	Asphalt Content of Bituminous Mixtures by the Nuclear Method
ASTM D 4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D 4791	Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D 4867	Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D 5444	Mechanical Size Analysis of Extracted Aggregate

ASTM D 5581	Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus (6" Diameter Specimen)
ASTM D 6926	Preparation of Bituminous Specimens Using MARSHALL Apparatus (6" Diameter Specimen)
ASTM D 6927	MARSHALL Stability and Flow of Bituminous Mixtures
ASTM E 11	Wire-Cloth Sieves for Testing Purposes
ASTM E 178	Dealing with Outlying Observations
AASHTO T 30	Mechanical Analysis of Extracted Aggregate
AASHTO T 110	Moisture or Volatile Distillates in Bituminous Paving Mixtures]
The Asphalt Institute's Manual No. 2 (MS-2)	Mix Design Methods for Asphalt Concrete

MATERIAL REQUIREMENTS

ASTM D 242	Mineral Filler for Bituminous Paving Mixtures
ASTM D 946	Penetration Graded Asphalt Cement for Use in Pavement Construction
ASTM D 3381	Viscosity-Graded Asphalt Cement for Use in Pavement Construction
ASTM D 4552	Classifying Hot-Mix Recycling Agents
AASHTO MP1	Performance Graded Binder Designation

END OF SECTION P-403

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 hundred (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 ton. 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 ton of emulsified asphalt material. This price shall be full compensation for furnishing all materials, for all preparation, delivery, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-603-5.1 Emulsified Asphalt Tack Coat - 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 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

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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 D5893 or 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, 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 1/4 inch $\pm$ 1/16 inch 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 No separate measurement shall be made for joint sealants for pavements. This work shall be incidental to other items and shall include the 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.

BASIS OF PAYMENT

605-5.1 No separate payment shall be made for joint sealants for pavements. This work shall be incidental to other items and shall include the 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.

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 D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

Item P-610 Concrete for Miscellaneous Structures

DESCRIPTION

610-1.1 This item shall consist of plain and reinforced structural Portland Cement Concrete, for use in concrete structures such as storm drain and electrical structures, prepared and constructed in accordance with these specifications, at the locations and of the form and dimensions shown on the plans.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. They may be subjected to inspection and tests at any time during the progress of their preparation or use. The source of supply of each of the materials shall be approved by the Engineer before delivery or use is started. 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 insure the 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 therein.

In no case shall the use of pit-run or naturally mixed aggregates be permitted. Naturally mixed aggregate shall be screened and washed, and all fine and coarse aggregates shall be stored separately and kept clean. The mixing of different kinds of aggregates from different sources in one storage pile or alternating batches of different aggregates will not be permitted.

610-2.2 Coarse Aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C 33, #57 rock. All coarse aggregate shall be washed.

610-2.3 Fine Aggregate. The fine aggregate for concrete shall meet the requirements of ASTM C 33. The fine aggregate shall be well graded from fine to coarse and shall meet the requirements of Table 1, when tested in accordance with ASTM C 136. All fine aggregate shall be washed and shall have a sand equivalent value of not less than 75.

TABLE 1 - GRADATION FOR FINE AGGREGATE.

Sieve Designation (square openings)	Percentage by Weight Passing Sieves
3/8 inch	100
No. 4	95-100
No. 16	45-80
No. 30	25-55
No. 50	10-30
No. 100	2-10

Blending will be permitted, if necessary, in order to meet the gradation requirements for fine aggregate. Fine aggregate deficient in the percentage of material passing the No. 50 mesh sieve may be accepted, provided that such deficiency does not exceed 5% and is remedied by the addition of pozzolanic or cementitious materials other than Portland Cement, as specified in 610-2.6 on admixtures, in sufficient quantity to produce the required workability as approved by the Engineer.

610-2.4 Cement. Cement shall conform to the requirements of ASTM C-150 Type II. The Contractor shall furnish vendors' certified test reports for each carload, or equivalent, of cement shipped to the project. The report shall be delivered to the Engineer before permission to use the cement is granted. All such test reports shall be subject to verification by testing sample materials received for use on the project.

610-2.5 Water. The water used in concrete shall be free from sewage, oil, acid, strong alkalies, vegetable matter, and clay and loam. Unless potable water is used, water shall be tested in accordance with AASHTO T 26.

610-2.6 Admixtures. The use of any material added to the concrete mix shall be approved by the Engineer. Before approval of any material, the Contractor shall be required to submit the results of complete physical and chemical analyses made by an acceptable testing laboratory. Subsequent tests shall be made of samples taken by the Engineer 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.

Pozzolanic admixtures shall be Class F fly ash meeting the requirements of ASTM C 618.

Air-entraining admixtures shall meet the requirements of ASTM C 260. Air-entraining admixtures shall be added at the mixer in the amount necessary to produce the specified air content.

Water-reducing, set-controlling admixtures shall meet the requirements of ASTM C 494, Type A, water-reducing or Type D, water-reducing and retarding. Water-reducing admixtures shall be added at the mixer separately from air-entraining admixtures in accordance with the manufacturer's printed instructions.

610-2.7 Premolded Joint Material. Premolded joint material for expansion joints shall meet the requirements of ASTM D1751.

610-2.8 Joint Filler. The types of joint fillers and joint seals shall be as shown on the plans or as required by the Specifications. The Contractor shall submit proposed joint filler material for the Engineer's review.

610-2.9 Steel Reinforcement. Reinforcing shall consist of Bar Mats, Welded Wire Fabric, or deformed Grade 60 rebar, conforming to the requirements of ASTM A 185, ASTM A 184, and ASTM A 615, respectively.

610-2.10 Cover Materials for Curing. Curing materials shall conform to the following specification: Liquid Membrane-Forming Compounds for Curing Concrete, ASTM C 309, Type 2.

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 herein. All machinery and equipment owned or controlled by the Contractor, which he proposes to use on the work, shall be of sufficient size to meet the requirements of the work, and shall be such as to produce satisfactory work; all work shall be subject to the inspection and approval of the Engineer.

610-3.2 Concrete Composition. The concrete shall develop variable compressive strengths up to 4,000 psi (depending on application) in 28-days as determined by test cylinders made in accordance with ASTM C 31 and tested in accordance with ASTM C 39. Unless otherwise noted, 4,000 psi concrete shall be used. The concrete shall contain not less than 470 pounds of cement

per cubic yard. The concrete shall have a slump of not more than 4-inches as determined by ASTM C 143. The water cementitious ratio shall not exceed 0.45 by weight.

610-3.3 Acceptance Sampling and Testing. Concrete for each structure will be accepted on the basis of the compressive strength specified in paragraph 3.2. The concrete shall be sampled in accordance with ASTM C 172. Compressive strength specimens shall be made in accordance with ASTM C 31 and tested in accordance with ASTM C 39.

Concrete cylindrical test specimens shall be made in accordance with ASTM C 31 and tested in accordance with ASTM C 39. The Contractor shall cure and store the test specimens under such conditions as directed. The Engineer will make the actual tests on the specimens at no expense to the Contractor.

610-3.4 Proportioning and Measuring Devices. When package cement is used, the quantity for each batch shall be equal to one or more whole sacks of cement. The aggregates shall be measured separately by weight. If aggregates are delivered to the mixer in batch trucks, the exact amount for each mixer charge shall be contained in each batch compartment. Weighing boxes or hoppers shall be approved by the Engineer and shall provide means of regulating the flow of aggregates into the batch box so that the required and exact weight of aggregates can be readily obtained.

610-3.5 Consistency. The consistency of the concrete shall be checked by the slump test specified in ASTM C 143.

610-3.6 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 C 94.

610-3.7 Mixing Conditions. The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40 degrees Fahrenheit without permission of the Engineer. If permission 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 degrees Fahrenheit, nor more than 90 degrees Fahrenheit. 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/her expense.

Re-tempering of concrete by adding water or any other material shall not be permitted.

The delivery of concrete to the job shall be in such a manner that batches of concrete will be deposited at uninterrupted intervals.

610-3.8 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the Engineer. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as designed 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 Contractor shall bear responsibility for their adequacy. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The internal ties shall be arranged so that, when the forms are removed, no metal will show in the concrete surface or discolor the surface when exposed to weathering. All forms shall be wetted with water or with a non-staining mineral oil which shall be applied shortly before the concrete is placed. Forms shall be constructed so that they can be removed without injuring the concrete or concrete surface. The forms shall not be removed before the expiration of at least 30-hours from vertical faces, walls, slender columns, and similar structures; forms supported by falsework under slabs, beams, girders, arches, and similar construction shall not be removed until tests indicate that at least 60% of the design strength of the concrete has developed.

610-3.9 Placing Reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concreting. 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.

610-3.10 Embedded Items. Before placing concrete, any items that are to be embedded shall be firmly and securely fastened in place as indicated. All such items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The Contractor shall not embed wood into the concrete. The concrete shall be spaded and consolidated around and against embedded items.

610-3.11 Placing Concrete. All concrete shall be placed during daylight, unless otherwise approved. The concrete shall not be placed until the depth and character of foundation, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved. Concrete shall be placed as soon as practical after mixing and in no case later than 1-hour after water has been added to the mix. The method and manner of placing shall be such to avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. Dropping the concrete a distance of more than 5-feet, or depositing a large quantity at one point, will not be permitted. Concrete shall be placed upon clean, damp surfaces, free from running water, or upon properly consolidated soil.

The concrete shall be compacted with suitable mechanical vibrators operating within the concrete. When necessary, vibrating shall be supplemented by hand spading with suitable tools to assure proper and adequate compaction. Vibrators shall be manipulated so as to work the concrete thoroughly around the reinforcement and embedded fixtures and into corners and angles of the forms. The vibration at any joint shall be of sufficient duration to accomplish compaction but shall not be prolonged to the point where segregation occurs. Concrete deposited under water shall be carefully placed in a compact mass in its final position by means of a tremie, a closed bottom dump bucket, or other approved method and shall not be disturbed after being deposited.

The minimum frequency of mechanical vibrators shall be 8,000 vibration cycles per minute. Application of vibrators shall be at points uniformly spaced and not farther apart than twice the radius over which the vibration is visibly effective. The Contractor shall provide sufficient equipment to insure uninterrupted and continuous vibration of concrete.

610-3.12 Construction Joints. When the placing of concrete is suspended, necessary provisions shall be made for joining future work before the placed concrete takes its initial set. For the proper bonding of old and new concrete, such provisions shall be made for grooves, steps, keys, dovetails, reinforcing bars or other devices as may be prescribed. The work shall be arranged so that a section begun on any day shall be finished during daylight of the same day. Before depositing new concrete on or against previously placed concrete, surfaces that have been in place for eight (8) hours or more shall be cleaned by abrasive blast methods. Surfaces of concrete that have been in place for less than eight (8) hours may be cleaned with air and water jets provided that the surface laitance and curing compound is removed.

610-3.13 Expansion Joints. Expansion joints shall be constructed at such points and of such dimensions as may be indicated on the drawings. The premolded filler shall be cut to the same shape as that of the surfaces being joined. The filler shall be fixed firmly against the surface of the concrete already in place in such manner that it will not be displaced when concrete is deposited against it.

610-3.14 Defective Work. Any defective work disclosed after the forms have been removed shall be immediately removed and replaced. If any dimensions are deficient, or if the surface of the concrete is bulged, uneven, or shows honeycomb, which in the opinion of the Engineer cannot be

repaired satisfactorily, the entire section shall be removed and replaced at the expense of the Contractor.

610-3.15 Surface Finish. All exposed concrete surfaces shall be true, smooth, free from open or rough spaces, depressions, or projections. The concrete in horizontal plane surfaces shall be brought flush with the finished top surface at the proper elevation and shall be struck-off with a straightedge and floated. Mortar finishing shall not be permitted, nor shall dry cement or sand-cement mortar be spread over the concrete during the finishing of horizontal plane surfaces.

When directed, the surface finish of exposed concrete shall be a rubbed finish. If forms can be removed while the concrete is still green, the surface shall be pointed and wetted and then rubbed with a wooden float until all irregularities are removed. If the concrete has hardened before being rubbed, a carborundum stone shall be used to finish the surface. When approved, the finishing can be done with a rubbing machine.

610-3.16 Curing and Protection. All concrete shall be properly cured and protected by the Contractor. The work shall be protected from the elements, flowing water, and from defacement of any nature during the building operations. The concrete shall be cured as soon as it has sufficiently hardened by covering with an approved material. If curing compound method is used, it shall be applied to the concrete immediately following the surface finishing operation in one or more applications totaling a rate of not less than one (1) gallon per 150 square feet.

Water-absorptive coverings shall be thoroughly saturated when placed and kept saturated for a period of at least three (3) days. All curing mats or blankets shall be sufficiently weighted or tied down to keep the concrete surface covered and to prevent the surface from being exposed to currents of air. Where wooden forms are used, they shall be kept wet at all times until removed to prevent the opening of joints and drying out of the concrete. Traffic shall not be allowed on concrete surfaces for seven (7) days after the concrete has been placed.

610-3.17 Drains or Ducts. Drainage pipes, conduits, and ducts that are to be encased in concrete shall be installed by the Contractor before the concrete is placed. The pipe shall be held rigidly so that it will not be displaced or moved during the placing of the concrete.

610-3.18 Cold Weather Protection. When concrete is placed at temperatures below 40 degrees Fahrenheit, the Contractor shall provide satisfactory methods and means to protect the mix from injury by freezing. The aggregates, or water, or both, shall be heated in order to place the concrete at temperatures between 50 and 90 degrees Fahrenheit.

Calcium chloride shall not be used in any concrete containing steel reinforcement or steel embedded items.

610-3.19 Filling Joints. All joints that require filling shall be thoroughly cleaned, and any excess mortar or concrete shall be cut out with proper tools. Joint filling shall not be started until after final curing and shall be done only when the concrete is completely dry. The cleaning and filling shall be carefully done with proper equipment and in a manner to obtain a neat looking joint free from excess filler.

CONTRACTOR QUALITY CONTROL

610-4.1 The Contractor shall be responsible for developing and implementing a Contractor Quality Control Program including inspection and testing to assure compliance with the requirements of this section in accordance with General Provisions Section 100.

METHOD OF MEASUREMENT

610-5.1 Portland Cement Concrete shall not be measured, and shall be incidental to the structure or item into which is incorporated.

610-5.2 Reinforcing steel shall not be measured, and shall be considered incidental to the structure or item into which it is incorporated.

TESTING REQUIREMENTS

ASTM C 31	Making and Curing Test Specimens in the Field
ASTM C 39	Compressive Strength of Cylindrical Concrete Specimens
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregate
ASTM C 138	Unit Weight, Yield, and Air Content of Concrete
ASTM C 143	Slump of Portland Cement Concrete
ASTM C 231	Air Content of Freshly Mixed Concrete by the Pressure Method

MATERIAL REQUIREMENTS

ASTM A 184	Specification for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A 185	Welded Steel Wire Fabric for Concrete Reinforcement
ASTM A 497	Specification for Welded Deformed Steel Wire Fabric for Concrete Pavement
ASTM A 615	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM C 33	Concrete Aggregates
ASTM C 94	Ready-Mixed Concrete
ASTM C 150	Portland Cement
ASTM C 171	Sheet Materials for Curing Concrete
ASTM C 260	Air-Entraining Admixtures for Concrete
ASTM C 309	Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 595	Blended Hydraulic Cements
ASTM C 618	Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete
ASTM D 1751	Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D 1752	Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction

END OF ITEM P-610

Item D-701 Pipes 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 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.

701-2.2 Pipe. Pipe shall be of the size called for on the plans and be rubber gasketed reinforced concrete D-load pipe (RGRCP) conforming to the requirements of MAG Section 735 and ASTM C 655.

701-2.3 Concrete. Concrete for pipe collars shall have a minimum compressive strength of 4,000 psi at 28 days and conform to the requirements of Civil Technical Specification Item P-610.

701-2.4 Rubber Gaskets. Rubber gaskets for rigid pipe shall conform to the requirements of MAG Section 618.

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 C 150, Type I. The sand shall conform to the requirements of ASTM C 144.

701-2.6 Pipe Bedding. All pipe bedding shall conform to MAG Section 702 base material.

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 6 inches on each side, Conform to MAG Section 601.

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 12 inches or one-half 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 contractor shall over excavate the pipe trench below the pipe and provide bedding consisting of MAG 702 crushed aggregate base course placed to a depth of 4" or 1/12 of the outside diameter of the pipe, whichever is greater. The compaction density of the bedding material shall be 90% per ASTM D698.

701-3.2 Laying Pipe. The pipe laying shall begin at the lowest point of the trench and proceeding 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.

701-3.3 Joining Pipe. Joints shall be sealed as specified in MAG Section 618.

701-3.4 Backfilling. Pipes shall be inspected before any backfill 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.

a. Under Aircraft Loaded Paved surfaces and/or as Shown on the Plans within Runway and Taxiway Safety Areas. For pipes placed under taxiway, connecting taxiway, aprons or associated shoulder pavements, backfill shall consist of ½ sack CLSM conforming to, and placed in accordance with, Item P-153 placed from the top of the pipe bedding to one foot above the top of the pipe. The remaining backfill in these areas shall be select material meeting the requirements of, and placed in accordance with, Item P-152 compacted to not less than 100% density as determined by ASTM D 1557. The select backfill shall be placed up to the bottom of the overlying pavement base course.

b. Non-aircraft loaded pavements. For pipes placed under infields or other non-aircraft loaded pavements, backfill shall consist of ½ sack CLSM conforming to, and placed in accordance with, Item P-153 placed from the top of the pipe bedding to one foot above the top of the pipe. The remaining backfill shall be 6" minus native material and shall be placed and compacted in layers not exceeding 8" in compacted thickness. The native material shall be placed from the top of the CLSM to the bottom of millings in paved infields, bottom of P-209 base course under non-aircraft loaded pavements or within 6" of the top of the trench in unpaved areas. The top 6" in unpaved areas shall contain 3" minus material with minimal compactive effort in unpaved areas. All native backfill material shall be compacted to a minimum of 95% maximum density per ASTM D698.

CONTRACTOR QUALITY CONTROL

701-4.1 The Contractor shall be responsible for developing and implementing a Contractor Quality Control Program including inspection and testing to assure compliance with the requirements of this section in accordance with General Provisions Section 100.

METHOD OF MEASUREMENT

701-5.1 The length of pipe shall be measured by linear feet of pipe in place, completed, and approved. It shall be measured along the centerline of the pipe from end or centerline of structure, whichever is applicable. The several classes, types and size shall be measured separately as noted below. All fittings and pipe cradles shall be included in the footage as typical pipe sections in the pipe being measured. Pipe collars shall be measured per each.

BASIS OF PAYMENT

701-6.1 Payment will be made at the contract unit price per linear foot for each kind of pipe of the type and size designated.

These prices shall fully compensate the Contractor for furnishing all materials and for the preparation, excavation, and installation of these materials; bedding, backfill, and for all labor, equipment tools, and incidentals necessary to complete the item. Unless surplus excavated material can be incorporated into other work, the surplus excavated material shall become the property of the Contractor and hauled and disposed of offsite. Hauling and disposal of surplus excavated material shall be included in the unit bid prices.

Payment will be made under:

Item D-701-6.1	18-inch RGRCP, Class V – per Linear Foot
Item D-701-6.2	24-inch RGRCP, Class V – per Linear Foot
Item D-701-6.3	18-inch Concrete Pipe Collar per MAG Std Dtl 505 – per Each
Item D-701-6.4	24-inch Concrete Pipe Collar per MAG Std Dtl 505 – per Each

MATERIAL REQUIREMENTS

ASTM C 94-04	Standard Specification for Ready Mixed Concrete
ASTM C 144-03	Standard Specification for Aggregate for Masonry Mortar
ASTM C 150-04	Standard Specification for Portland Cement
ASTM C 443-03	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C 655-02	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM D 1056-00	Standard Specification for Flexible Cellular Materials—Sponge or Expanded Rubber
AASHTO M 198	Joints for Circular Concrete Sewer and Culvert Pipe Using Flexible Watertight Gaskets

REFERENCES

MAG 618	Storm Drain Construction with Concrete Pipe
P-153	Controlled Low-Strength Material
D-701	Reinforced Concrete Pipe

TESTING REQUIREMENTS

ASTM D698-00ae1	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort
ASTM D1557-02e1	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort

END ITEM D-701

Item D-751 Manholes, Trench Drains, Junction Structures and Catch Basins

DESCRIPTION

751-1.1 This item shall consist of the construction of new manholes, new trench drains, and new catch basins, 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 Engineer.

MATERIALS

751-2.1 Brick. The brick shall conform to the requirements of ASTM C 32, Grade SM.

751-2.2 Mortar. Mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C 150, Type I. The sand shall conform to the requirements of ASTM C 144.

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 Civil Technical Specification Item P-610, 4000 psi.

751-2.4 Precast Concrete Pipe Manhole Rings. Precast concrete pipe manhole rings shall conform to the requirements of ASTM C 478. 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.

751-2.5 Frames, Covers, and Grates. The castings shall conform to one of the following requirements:

- a. Gray iron castings shall meet the requirements of ASTM A 48, Class 30B and 35B.
- b. Malleable iron castings shall meet the requirements of ASTM A 47.
- c. Steel castings shall meet the requirements of ASTM A 27.
- d. Structural steel for grates and frames shall conform to the requirements of ASTM A 283, Grade D.
- e. Ductile iron castings shall conform to the requirements of ASTM A 536.
- f. Austempered ductile iron castings shall conform to the requirements of ASTM A 897.

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 A 123.

CONSTRUCTION METHODS

751-3.1 Unclassified Excavation.

a. The Contractor shall do all excavation for structures and structure footings to the lines and grades or elevations, shown on the plans or as staked. 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 Engineer may order, in writing, changes in dimensions or elevations of footings necessary to secure a satisfactory foundation. For trench drains, the depth of the trench shall be sufficient to permit satisfactory installation and jointing of the drain and placing of a low slump concrete under and around the drain as detailed on the plans. The contractor shall over excavate below the bottom of the structure and provide bedding consisting of MAG 702 ABC placed to a depth as shown on the plans. The compaction density of the bedding material shall be 90% per ASTM D698.

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. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation, and excavation to final grade shall not be made until just before the concrete or reinforcing is to be 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. 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. Removal shall be effected in a manner which will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

e. After each excavation is completed, the Contractor shall notify the Engineer to that effect; and concrete or reinforcing steel shall be placed after the Engineer has approved the depth of the excavation and the character of the foundation material.

751-3.2 Concrete Structures. Concrete structures shall be built on prepared foundations, conforming to the dimensions and form 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 Engineer before the concrete is poured.

All invert channels shall be constructed and shaped accurately so as to be smooth, uniform, and cause minimum resistance to flowing water. The interior bottom shall be sloped downward toward the outlet.

751-3.3 Precast Concrete Pipe Structures. Precast concrete pipe structures shall be constructed on prepared or previously placed slab foundations and shall conform to the dimensions and locations shown on the plans. All precast concrete pipe sections necessary to build a completed structure shall be furnished. The different sections shall fit together readily, and all jointing and connections shall be cemented with mortar. The top of the upper precast concrete pipe member 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.

751-3.4 Inlet and Outlet Pipes. Inlet and outlet pipes shall extend through the walls of the structures

for a sufficient distance beyond the outside surface to allow for connections but shall be cut off flush with the wall on the inside surface, unless otherwise directed. For concrete or brick structures, the mortar shall be placed around these pipes so as to form a tight, neat connection. Replacement of any damaged pipe or pipe that is necessary for installation of drainage structures shall be in accordance with Item D-701 "Pipe for Storm Drains and Culverts". There shall be no separate measurement or payment for such pipe, and the cost of such pipe shall be incidental to the cost of the structure.

751-3.5 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 Engineer, 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.

When frames or fittings are to be placed upon previously constructed masonry, the bearing surface or masonry shall be brought true to line and grade and shall present an even bearing surface in order that 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 and approved by the Engineer. All units shall set firm and secure.

After the frames or fittings have been set in final position and the concrete or mortar has been allowed to harden for seven (7) days, then the grates or covers shall be placed and fastened down.

751-3.6 Backfilling.

a. Under Aircraft Loaded Pavements. For structures placed within runway, taxiway, connecting taxiway, aprons, or associated shoulder pavements, backfill shall consist of select materials meeting the requirements of and placed in accordance with Item P-152 compacted to not more than 100% density as determined by ASTM D 1557. The select backfill shall be placed up to the bottom of the overlaying pavement base course.

b. Non-Aircraft Loaded Pavements. For structures placed within infields or other non-aircraft loaded pavements, backfill shall consist of 6" minus native material and shall be placed and compacted in layers not exceeding 8" in compacted thickness. The native materials shall be placed to the bottom of millings in paved infields, bottom of P-209 base course under non-aircraft loaded pavements or within 6" of the top of finished grade in unpaved areas. The top 6" in unpaved areas shall contain 3" minus material. All native backfill material shall be compacted to a minimum of 95% maximum density per ASTM D 698.

c. After a structure has been completed, the area around it shall be filled with approved native material, in horizontal layers not to exceed eight (8) inches in loose depth, and compacted to the density required in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the Engineer.

d. Backfilling shall not be placed against any structure until permission is given by the Engineer. In the case of concrete, such permission shall not be given until the concrete has been in place 7 days, or until tests made by the laboratory under supervision of the Engineer 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.

e. Backfill shall 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 the structure involved.

751-3.7 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 soil may be deposited in embankments, shoulders, or as ordered by the Engineer provided the surplus material conforms to the embankment quality requirements. The Contractor shall restore all disturbed areas to their original condition.

After all work is completed, the Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

CONTRACTOR QUALITY CONTROL

751-4.1 The Contractor shall be responsible for developing and implementing a Contractor Quality Control Program including inspection and testing to assure compliance with the requirements of this section in accordance with the General Provisions Section 100.

METHOD OF MEASUREMENT

751-5.1 Manholes, catch basins, and junction structures shall be measured by the unit.

BASIS OF PAYMENT

751-6.1 The accepted quantities of manholes, catch basins, 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 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-751-6.1	Construct Concrete Catch Basin Per MAG Std Dtl 537 (Single) – per Each
Item D-751-6.2	Construct Concrete Catch Basin Per MAG Std Dtl 537 (Double) – per Each
Item D-751-6.3	Construct Concrete Catch Basin Per COP Std Dtl P1570 (Triple) T=6” – per Each
Item D-751-6.4	Construct Concrete Catch Basin Per COP Std Dtl P1570 (Triple) T=8” – per Each
Item D-751-6.5	Construct Aircraft Rated Storm Drain Manhole – per Each

MATERIAL REQUIREMENTS

ASTM A 27-03	Standard Specifications for Steel Castings, Carbon, for General Application
ASTM A 47-99	Standard Specifications for Ferritic Malleable Iron Castings
ASTM A 48-03	Standard Specifications for Gray Iron Castings

ASTM A 123-02	Standard Specifications for Zinc (Hot Dip-Galvanized) Coatings on Iron and Steel Products
ASTM A 283-03	Standard Specifications for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A 536-84e1	Standard Specifications for Ductile Iron Castings
ASTM A 897-03.	Standard Specifications for Austempered Ductile Iron Castings
ASTM C 32-04	Standard Specifications for Sewer and Manhole Brick (Made from Clay or Shale)
ASTM C 144-03	Standard Specifications for Aggregate for Masonry Mortar
ASTM C 150-04	Standard Specifications for Portland Cement
ASTM C 478-03a	Standard Specifications for Precast Reinforced Concrete Manhole Sections

TESTING REQUIREMENTS

ASTM D 698-00ae1	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.

END OF SECTION D-751

SECTION III-D

ELECTRICAL TECHNICAL SPECIFICATIONS

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ITEM L-100 ELECTRICAL GENERAL REQUIREMENTS

DESCRIPTION

100-1.1 GENERAL. This Item includes furnishing and installing all material, equipment and apparatus, and all labor, tools, services and equipment required for the demolition/removal of portions of the existing airfield lighting systems, as specified in this specification and as shown in the drawings.

- a. The demolition, salvage and/or removal of portions of the existing airfield lighting systems.
- b. Temporary airfield lighting systems.

Installation shall be in accordance with Specifications FAA-C-1217 and FAA-C-1391, except as specified herein. Perform all work not included in the FAA Specifications in accordance with the National Electrical Code, applicable local and Phoenix Deer Valley Airport standards and regulations.

100-1.2 DEMOLITION AND SALVAGE.

- a. Demolition (removal and non-salvage to Owner or for re-installation) of other airfield electrical system elements shall include the intent, but not limited to the specific elements, of the following:
 - (1) Series and parallel Airfield circuit power cables and fixtures.
 - (2) Underground conduits and duct banks, both concrete (slurry) encased and direct earth buried.
 - (3) Concrete Hand Holes
 - (4) Grading and backfill associated with removal of the foregoing elements shall be covered under other Items of these specifications (P-152, "Excavation and Embankment").

100-1.3 NEW CONSTRUCTION GRADING AND BACKFILL.

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

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

- a. Conflicts between Drawing and Specifications (Contract Documents) and between Contract Documents and references within the Contract Documents: Drawings and specifications are complementary. Work called for by one is binding as if called for by both. Prospective Contractors shall, as part of their proposals, enumerate, identify and list conflicts they find to exist within the Contract Documents, and between these Documents and the rules, regulations, standards and codes of the authority having jurisdiction (Airport Authority, City

County, etc). local Utility companies and local County or State governing bodies. No Allowance shall subsequently be made to the Contractor by reason of his/her failure to have brought said discrepancies to the attention of the Consultant during the bidding period or by reason of any error on the Contractor's part.

100-1.5 TEMPORARY LIGHTING AND CIRCUITS.

Contractor shall coordinate with Operations and Maintenance at the end of each daylight work shift to verify that all airfield lighting circuits are operational. Contractor shall provide all labor and material for this work.

- a. Temporary cable installation shall be protected. Temporary cable (jumpers) and its installation through the existing conduit system or through temporary conduit, shall all be furnished, installed, and removed by the Contractor at no additional compensation beyond the payment for each demolition item. No separate payment will be made for counterpoise, ground rods, grounding connectors, conduit, trench and backfill, or other protection for the temporary jumper cable. Temporary cable shall not be used in the permanent installation. **Temporary cable shall not be direct buried.** Other methods may be used for short term or emergency situations only if approved by the Deer Valley Airport Head Airfield Electrician. Where cable in conduit is approved for temporary placement on the surface, the conduit shall be held in place in a manner approved by the Construction Manager, and the Contractor shall provide temporary traffic protection for the cable and/or conduit. Temporary cable locations shall be marked sufficiently to prevent damage from construction equipment.
- b. Contractor shall provide and maintain on hand sufficient equipment required to provide temporary lighting and circuit extensions.

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

NEC	National Electrical Code
FAA-STD-019e	Lightning Protection, Grounding, Bonding and Shielding Requirements for Facilities
FAA-C-1391b	Installation and Splicing of Underground Cables
Local Governing Bodies' Codes and Regulations	Public Works Department, City of Phoenix, Maricopa Association of Governments (MAG)

100-1.7 SHOP DRAWINGS AND MATERIAL LISTS. Prior to the installation of any material and equipment and within 30 days of contract award, the Contractor shall submit to the Owner for approval six (6) copies of manufacturers' brochures or electronic PDF, tabbed by specification

containing complete dimensional and performance characteristics, wiring diagrams, installation and operation instructions, etc., for the equipment listed in the individual L-Series specification Items. All shop drawings and equipment submittals shall include a signed certification by the contractor that the proposed items are listed in the FAA certification program.

Taxiway signs and related materials covered by FAA Specifications shall have the prior approval of the Federal Aviation Administration, Airport Service, Washington, DC 20591, shall be listed in the latest edition of Advisory Circular 150/5345-53, Airport Lighting Equipment Certification Program, shall be certified by an approved laboratory such as ETL as conforming with applicable FAA standards and requirements, or shall be verified as exceeding FAA standards as required by these specifications.

All new components furnished by the contractor under this project must also be listed as approved in the FAA's Airport Lighting Certification Program, which is available on-line at:
http://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.information/documentID/22802

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

The submittal shall be complete and made in one submission in booklet form with hard-bound cover or electronic PDF, tabbed by specification. Partial submissions will not be reviewed or considered.

100-1.8 SPARE FIXTURE INVENTORY REPLACEMENT. The Contractor shall replace spares or salvaged lighting items that the Contractor uses or damages during construction so that at the end of the project, the stipulated number (minimum) of good working spares shall be delivered to the Owner.

EQUIPMENT AND MATERIALS

100-2.1 EQUIPMENT. Conduits, conduit fittings, conductors, connectors, boxes, wiring devices, panelboards, and circuit breakers shall meet requirements of Specification FAA-C-1217.

100-2.2 CONDUIT, EXTERIOR. Conduits in concrete slabs, in block walls or exterior exposed shall be rigid galvanized steel (RGS). Conduits run on the exterior of the building above or below the grade for the earth grounding system shall be rigid zinc-coated steel. Radius of bends in RGS shall be minimum 12 nominal pipe diameters. Rigid galvanized steel conduit run in concrete or below slab on grade, or in the ground, shall be field wrapped or shall have factory-applied coating as required in Specification FAA-C-1217. Field-made joints, fittings, abrasions and holidays shall be coated or wrapped with material equal to the original coating or wrapping.

100-2.3 CONDUIT, UNDERGROUND. Conduits run underground are specified in Item L-110 of these specifications.

100-2.4 600 VOLT WIRE. All wire shall have copper conductors. Size shall be American Wire Gauge (AWG) with size for power circuit as shown on the project drawings. Size for all control circuits shall be #16 AWG. All power wire and all control wire shall be stranded. Insulation shall be Type THW or THWN and shall be continuous and color coded as follows:

		<u>120/208V</u>	<u>277/480V</u>
Line 1 or	Phase "A"	Black	Brown
Line 2 or	Phase "B"	Red	Orange
	Phase "C"	Blue	Yellow
	Neutral	White	Gray
	Ground	See Item 100-3.6	
	Control	Black with numbered adhesive markers on both ends.	

All wire shall be continuous; no splices will be permitted. All wire shall be drawn into conduit with adequate lubricating compound to prevent damage to insulation. Pull tension shall not exceed manufacturer's recommendation.

100-2.5 CONDUIT FITTINGS. Each conduit and nipple entrance to junction boxes, panelboards, disconnect switches, duct, raceway, equipment cabinets, and other such electrical enclosures shall be fitted with double locknuts (one each side of metal penetrated) and insulating bushing. Bushings on 1-1/4 inch and larger conduits shall be insulated metallic, type OZ/Gedney Cat. No. IBC Series, or equal; bushings for 3/4 inch and 1 inch shall be plastic insulated T&B rated for 150 C, or equal. All insulated bonding and grounding bushings of conduits for 2400 volts or higher voltages, for conduit going underground, and for conduits going into concrete slabs shall be OZ/Gedney Cat. No. IBC-xxL (fitted with grounding lug), or equal. The bushings shall be connected to the grounding system within the terminating enclosure and not on the underground end. The buried end of each conduit shall be fitted with a thermosetting, plastic-insulated, metallic bushing. All openings where conduits enter junction boxes, other enclosures and shelters shall be sealed weather-tight. The conduit shall be capped, if left empty, or sealed with Ducseal, or equal, around the conductors for exterior conduits.

100-2.6 CONCRETE-ENCASED DUCT. Concrete-encased PVC duct shall be as specified in Item L-110.

100-2.7 CONCRETE DUCT MARKERS. Markers shall be as specified in Item L-110 and as detailed on drawings.

100-2.8 CONCRETE HANDHOLES. Hand holes shall be as specified in Item L-115 and as detailed on drawings.

100-2.9 LIGHT BASES AND TRANSFORMER HOUSING. Base cans, transformer housings and covers shall be specified in item L-125 and as detailed on drawings.

CONSTRUCTION METHODS

100-3.1 EXISTING UTILITIES. Prior to any excavation or trenching, locate any existing cables and utilities which will be crossed by the trench. Ensure these utilities are permanently disconnected if they are going to be demolished. The existing service lines shall be exposed by hand-digging in those areas that will be crossed and shall be protected from any possible damage. If any damage occurs, it shall be the Contractor's responsibility to immediately repair such damage with materials and methods approved by the Owner and in compliance with applicable codes and standards, at no additional cost to the Owner. Existing utilities to be abandoned or removed at the point of crossing as shown on the drawings.

100-3.2 DEMOLITION.

A. General Airfield Lighting.

- (1) Remove indicated taxiway edge lights with isolation transformers and cover light bases to protect during infield paving. Safely store until re-installation.
- (2) Remove indicated airfield cable segments from within conduits and duct banks, where infield grading is such to provide less than 18" minimum coverage, as determined by modified drainage and swale grading. Existing cable may be sleeved above ground as temporary jumpers to facilitate modification to lower existing conduits.
- (3) Remove indicated conduits, ducts, and conductors from site and dispose of according to local regulations. Provide backfill and compaction meeting the requirements of P-152. Backfill and compaction shall be incidental to the demolition items. Non – salvageable material, including conduit and conductors, shall become the property of the Contractor and shall be removed from the site and disposed of according to local regulations.
- (4) Salvageable material and equipment, including fixtures and isolation transformers shall be re-installed.
- (5) Segments of existing airfield circuit cables between hand holes shall be carefully removed, neatly coiled within the structure where cables have been removed back to and protected during construction until re-installation as indicated on plans.

100-3.3 CONDUCTORS. Installation of underground 5 kV conductors is specified in Item L-108 of these specifications.

100-3.4 GROUNDING. All metal support structures, and metal enclosures shall be grounded in accordance with the requirements of the Specifications FAA-C-1217, FAA-C-1391, and FAA-STD-019, and as indicated on the drawings. Grounding of electrical equipment is considered incidental to the respective bid item, no separate payment will be made.

100-3.5 GROUND RODS. Grounding rods shall be 3/4-inch diameter by 10 feet long copper-jacketed steel. Grounding connections shall be by the exothermic weld process, Cadweld or equal. Extruded, drawn or stamped-type ground clamps will not be acceptable. The resistance to ground shall not exceed 25 ohms.

100-3.6 GROUND CONDUCTORS. Equipment grounding conductors for 480Volt NAVAID circuits shall be insulated copper. Internal grounding conductor for 5kV circuits are to be bare #6 stranded and sized as shown on the project drawings; and all grounds will be shown in accordance with Article 250.122 of the National Electrical Code and with FAA-STD-019. Attachment of wire to supports, boxes, etc., shall be accomplished using approved ground lug attached with a separate stainless-steel screw, lock washer and nut. Screws used for support of the electrical enclosure shall not be used for connection of the ground wire. Pipe straps shall not be used for ground purposes.

COLOR CODING OF GROUND CONDUCTORS

<u>TYPE OF GROUND CONDUCTOR</u>	<u>COLOR OF INSULATION</u>
Grounding Electrode Conductor	Bare – No Insulation
Equipment Grounding Conductor	Green (safety)

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

Electrical continuity of cable armor or shield shall be maintained. Grounding of the cable armor or shield shall be required at all terminations and shall be accomplished by connecting a #6 AWG solid bare copper wire to the cable armor or shield by means of a compression-type ground clamp installed within the terminating enclosure. Armor or shield ground wire shall be connected to the ground electrode conductor using split bolt connector, Burndy or equal. Grounding of direct earth burial (DEB) armored power and shielding control cable shall be at each end in accordance with FAA-C-1391.

100-3.7 IDENTIFICATION. Conductors shall be identified as per FAA-C-1217, Sections 4.6.4.2.4 and 4.16. Cable tagging and markers shall be identified as per FAA-C-1391, Sections 3.5.1 and 2. Transformers and junction boxes shall be identified by nameplate of nonferrous metal or rigid plastic, engraved with 3/8-inch-high lettering with information as per FAA-C-1217, Section 4.16. Installation of circuit ID tags is considered incidental to the respective bid item; no separate payment will be made.

100-3.8 TESTING AND SUBMITTALS. Equipment and materials list and shop drawings shall be submitted as per FAA-C-1217, Section 5.1. Testing shall be required and performed as per

FAA-C-1217, Section 5.3 and FAA-C-1391, Section 4. The Contractor shall pretest all cable on the reel prior to installation and provide a copy of the test results to the Owner. The Contractor shall be responsible for repairs or replacement of any cable found defective after installation.

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

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

Item	Test Required	Manufacturer's Rep. Present?
5 kV Rated Airfield Lighting and Power Cables (On the Reel, Not Including Equipment)	Megger check 500 to 1000 volts prior to installation. Values of insulation resistance for each reel shall be noted and given to the Construction Manager/ Owner for acceptance. It is expected that the readings will be greater than 1000 meg-ohms (1 gig-ohm).	No
5 kV Rated Airfield Lighting and Power Cables (Installed in This Project)	Megger check at 500 to 1000 volts at the completion of installation. Test every circuit for conductor-to-ground and conductor-to-conductor (between circuits) insulation resistance. Test results shall be tabulated and given to the Construction Manager/Owner for acceptance. It is <u>required</u> that the readings be greater than 100 meg-ohms.	No
5 kV Rated Airfield Lighting and Power Cables (All Circuits Emanating from any Lighting Vault Modified in This Project)	Megger check at 500 to 1000 volts prior to the start of and at the completion of installation. Test every circuit for conductor-to-ground and conductor-to-conductor (between circuits) insulation resistance. Test results shall be tabulated and given to the Construction Manager/Owner for acceptance.	No
5 kV and 600 Volt and Multi-pair Cables	If a power cable puller is used, continuous-tape pull tension readings for each section of cable shall be provided to the Construction Manager for review.	No

100-3.9 NOTIFICATION OF TESTING. The Contractor shall notify the project RE and the City of Phoenix, a minimum of 48 hours in advance of system, or partial system, testing including, but not limited to, installed cable megger testing, and operational testing of any modified lighting circuit.

100-3.10 AIRFIELD LIGHTING VAULT LOCK-OUT TAG-OUT POLICY. The purpose of this procedure is to standardize the lockout tag out procedures between Electrical Contractors, Goodyear Airport Electricians, Operations and Air Traffic Control Tower (ATCT).

- (1) Goodyear Airport electricians responding to a lock-out/tag-out request will coordinate with the ATCT through Operations.
- (2) After Operations notifies electricians of closures, the Goodyear Airport electricians will turn off the closed runways/taxiways using the airfield computer system.
- (3) The Contractor will supply an approved breaker-locking device and lock, then lock off the individual breakers for the circuits to be locked out. These items will remain in the vaults in a lock box provided by Goodyear Airport Electrical Section.
- (4) The Goodyear Airport Electric Section will lock the panel doors shut with a hasp and an Electrical Section Lock.
- (5) The S-1 cutouts will be pulled, locked and placed on the corresponding regulator by the electrical contractor.
- (6) The electrical contractor and Goodyear Airport electricians must fill out lock-out forms before leaving the vault.
- (7) Upon completion of the lockout, the Contractor will remove all locks and install the cutouts. All circuits must be verified operational in the manual mode on the regulator. Operations will perform a complete check the lights in the field, to verify actual operation.
- (8) When that has been completed, Goodyear Airport electricians will notify Operations when lock-in is complete and regulators are in remote control; Operations will notify the ATCT that they have control of the airfield lighting.
- (9) Complete lock-out/lock-in forms.

This procedural checklist must be followed to the letter.

METHOD OF MEASUREMENT

100-4.1 ELECTRICAL SERVICES. The electrical services to be paid under this Item shall include:

- a. Removal of indicated portions of the airfield lighting system of indicated cable, conduit and duct bank segments which are affected by modified infield grading and drainage swales. The quantity to be measured shall be for the removal of cable, conduit and duct bank segments as required to relocate the affected utility segment to an increased depth, in accordance with the Plans.
- b. Removal, protecting and safely storing of any light fixtures and isolation transformers that are designated for re-installation, including taxiway edge lights and existing elevated RGL fixtures.
- c. Cable removal is quantified as an effort to remove any number of conductors from within each conduit in a single run or duct bank. No separate measurement will be made for multiple conductors located in each conduit.

100-4.2 TEMPORARY AIRFIELD LIGHTING SYSTEM. This item shall consist of new L-824, Type C, 1/C or 2/C #8, 5 kV cable which shall include furnishing, installing and removal of temporary cables, temporary sign covers as required. No separate measurement or payment will be made for moving temporary facilities as required to provide Contractor's access to work sites. The use of temporary cables covered under this item shall be limited to "jumpers" as required to maintain circuit continuity. Cable used for temporary application shall not be used for permanent application.

BASIS OF PAYMENT

100-5.1 ELECTRICAL SERVICES. Payment will be made at the contract price for the electrical services completed and accepted. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete this Item. Removal of existing conduits and conductors associated with demolished items shall be incidental to the costs. The unit price of each of these items shall also include the Contractor's overhead, profit and markup.

Payment will be made under:

Item L-100-5.1	Remove Existing Airfield Lighting Cable to Lower Conduit or Duct Bank Segments – per Linear Foot
Item L-100-5.2	Excavate and Remove Existing Conduit or Segment (If Required - Utility Relocation Item) – per Linear Foot
Item L-100-5.3	Excavate and Remove Existing Ductbank or Segment (If Required - Utility Relocation Item) – per Linear Foot

Item L-100-5.4	Remove and Salvage Existing Airfield Guidance Sign for Reinstallation, Remove Concrete Sign Base – per Each
Item L-100-5.5	Remove Abandoned Sign Base / Concrete Foundation – per Each
Item L-100-5.6	Remove and Salvage Existing Taxiway Edge Light and Isolation Transformer, Remove Existing Base Can – per Each
Item L-100-5.7	Remove and Salvage Existing Taxiway Edge Light and Isolation Transformer, Install Temp Cover on Existing Base Can – per Each
Item L-100-5.8	Remove and Salvage Existing Elevated Runway Guard Light and Isolation Transformer, Remove Existing Base Can – per Each
Item L-100-5.9	Excavate and Remove Existing 4'x4'x4' Concrete Hand Hole – per Each
Item L-100-5.10	Adjust Existing Concrete Duct Marker to Grade – per Each
Item L-100-5.11	Temporary Airfield Lighting and Cable Jumpers – per Lump Sum

END OF ITEM L-100

ITEM L-107 AIRPORT WIND CONES

DESCRIPTION

107-1.1 This item shall consist of removal of existing airport wind cones and 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, and a concrete foundation. 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 supplemental wind cone assembly shall be Type L-806(L) LED, Style I-B (Internally Lighted), Size 1 for connection to the 6.6Amp, 3-step, constant current, runway circuit. The new isolation transformer shall be sized per the Manufacturer.

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 (0.24 liter) of raw linseed oil to each gallon (liter).

CONSTRUCTION METHODS

107-3.1 Installation. The pole shall be installed on a concrete foundation per the plans with a frangible coupling.

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 (3.7-m) assembly or pipe support of the 8-foot (2.4-m) 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 (60 cm)) so that the top is at least 6 inches (150 mm) 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. New supplemental wind cone shall be LED.

107-3.8 Chain and padlock. (Not Required for L-806) 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 removed as completed units, accepted, and ready for operation.

107-4.2 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 and salvage of existing airport wind cone and concrete foundation furnishing all materials and for all preparation and removal of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

107-5.2 Payment will be made at the contract unit price for each completed and accepted job. This price shall be full compensation for installation of new L-806(L), internally lighted LED wind cone and isolation transformer on new concrete foundation 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-107-5.1	Remove and Salvage Existing Supplemental Wind Cone, Remove Concrete Foundation -- per Each
Item L-107-5.2	Install New L-806(L) Internally Lighted LED Supplemental Wind Cone and Isolation Transformer on New Concrete Base -- per Each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-5	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)

Federal Standard (FED STD)

FED STD 595	Colors Used in Government Procurement

Master Painter's Institute (MPI)

MPI Reference #9	Alkyd, Exterior, Gloss (MPI Gloss Level 6)

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)

END OF ITEM L-107

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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 bare solid copper wire for counterpoise and/or No. 6 AWG insulated stranded for grounding bond wire per ASTM B3 and ASTM B8 and shall be bare copper wire. For voltage powered circuits, the equipment grounding conductor shall comply with NEC Article 250.

Ground rods shall be copper-clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case be less than 10 feet long and 3/4 inch in diameter.

108-2.4 CABLE CONNECTIONS. In-line connections or splices of underground primary cables shall be of the type called for on the plans, and shall be one of the types listed below. No separate payment will be made for cable connections.

a. The cast splice. A cast splice, employing a plastic mold and using epoxy resin equivalent to that manufactured by 3M™ Company, "Scotchcast" Kit No. 82-B, or an approved equivalent, used for potting the splice is acceptable.

b. The field-attached plug-in splice. Field attached plug-in splices shall be installed as shown on the plans. The Contractor shall determine the outside diameter of the cable to be spliced and furnish appropriately sized connector kits and/or adapters. Tape or heat shrink tubing with integral sealant shall be in accordance with the manufacturer's requirements. Primary Connector Kits manufactured by Amerace, "Super Kit", Integro "Complete Kit", or approved equal is acceptable.

c. The factory-molded plug-in splice. Specification for L-823 Connectors, Factory-Molded to Individual Conductors, is acceptable.

d. The taped or heat-shrink splice. Taped splices employing field-applied rubber, or synthetic rubber tape covered with plastic tape is acceptable. The rubber tape should meet the requirements of ASTM D4388 and the plastic tape should comply with Military Specification MIL-I-24391 or Commercial Item Description A-A-55809. Heat shrinkable tubing shall be heavy-wall, self-sealing tubing rated for the voltage of the wire being spliced and suitable for direct-buried installations. The tubing shall be factory coated with a thermoplastic adhesive-sealant that will adhere to the insulation of the wire being spliced forming a moisture- and dirt-proof seal. Additionally, heat shrinkable tubing for multi-conductor cables, shielded cables, and armored cables shall be factory kits that are designed for the application. Heat shrinkable tubing and tubing kits shall be manufactured by Tyco Electronics/ Raychem Corporation, Energy Division, or approved equivalent.

In all the above cases, connections of cable conductors shall be made using crimp connectors using a crimping tool designed to make a complete crimp before the tool can be removed. All L-823/L-824 splices and terminations shall be made per the manufacturer's recommendations and listings.

All connections of counterpoise, grounding conductors and ground rods shall be made by the exothermic process or approved equivalent, except that a light base ground clamp connector shall be used for attachment to the light base. All exothermic connections shall be made per the manufacturer's recommendations and listings.

108-2.5 SPLICER QUALIFICATIONS. Every airfield lighting cable splicer shall be qualified in making airport cable splices and terminations on cables rated at or above 5,000 volts AC. The Contractor shall submit to the RPR proof of the qualifications of each proposed cable splicer for the airport cable type and voltage level to be worked on. Cable splicing/terminating personnel shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.

108-2.6 CONCRETE. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

108-2.7 FLOWABLE BACKFILL. Flowable material used to backfill trenches for power cable trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

108-2.8 CABLE IDENTIFICATION TAGS. Cable identification tags shall be made from a non-corrosive material with the circuit identification stamped or etched onto the tag. The tags shall be of the type as detailed on the plans.

108-2.9 Tape. Electrical tapes shall be Scotch™ Electrical Tapes –Scotch™ 88 (1-1/2 inch wide) and Scotch™ 130C® linerless rubber splicing tape (2-inch wide), as manufactured by the Minnesota Mining and Manufacturing Company (3M™), or an approved equivalent.

108-2.10 ELECTRICAL COATING. Electrical coating shall be Scotchkote™ as manufactured by 3M™, or an approved equivalent.

108-2.11 EXISTING CIRCUITS. Whenever the scope of work requires connection to an existing circuit, the existing circuit's insulation resistance shall be tested, in the presence of the RPR. The test shall be performed per this item and prior to any activity that will affect the respective circuit. The Contractor shall record the results on forms acceptable to the RPR. When the work affecting the circuit is complete, the circuit's insulation resistance shall be checked again, in the presence of the RPR. The Contractor shall record the results on forms acceptable to the RPR. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs to the existing circuit to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, if necessary, shall be borne by the Contractor. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.

108-2.12 DETECTABLE WARNING TAPE. Plastic, detectable, American Public Works Association (APWA) Red (electrical power lines, cables, conduit and lighting cable) with continuous legend tape shall be polyethylene film with a metalized foil core and shall be 3-6 inches wide. Detectable tape is incidental to the respective bid item. Detectable warning tape for communication cables shall be orange. Detectable warning tape color code shall comply with the APWA Uniform Color Code.

CONSTRUCTION METHODS

108-3.1 GENERAL. The Contractor shall install the specified cable at the approximate locations indicated on the plans. Unless otherwise shown on the plans, all cable required to cross under pavements expected to carry aircraft loads shall be installed in concrete encased duct banks. Cable shall be run without splices, from fixture to fixture.

Cable connections between lights will be permitted only at the light locations for connecting the underground cable to the primary leads of the individual isolation transformers. The Contractor shall be responsible for providing cable in continuous lengths for home runs or other long cable runs without connections unless otherwise authorized in writing by the RPR or shown on the plans.

In addition to connectors being installed at individual isolation transformers, L-823 cable connectors for maintenance and test points shall be installed at locations shown on the plans. Cable circuit identification markers shall be installed on both sides of the L-823 connectors installed and on both sides of slack loops where a future connector would be installed.

Provide not less than 3 feet of cable slack on each side of all connections, isolation transformers, light units, and at points where cable is connected to field equipment. Where provisions must be made for testing or for future above grade connections, provide enough slack to allow the cable to be extended at least one foot vertically above the top of the access structure. This requirement also applies where primary cable passes through empty light bases, junction boxes, and access structures to allow for future connections, or as designated by the RPR.

Primary airfield lighting cables installed shall have cable circuit identification markers attached on both sides of each L-823 connector and on each airport lighting cable entering or leaving cable access points, such as manholes, hand holes, pull boxes, junction boxes, etc. Markers shall be of sufficient length for imprinting the cable circuit identification legend on one line, using letters not less than 1/4 inch in size. The cable circuit identification shall match the circuits noted on the construction plans.

108-3.2 INSTALLATION IN DUCT BANKS OR CONDUITS. This item includes the installation of the cable in duct banks or conduit per the following paragraphs. The maximum number and voltage ratings of cables installed in each single duct or conduit, and the current-carrying capacity

of each cable shall be per the latest version of the National Electric Code, or the code of the local agency or authority having jurisdiction.

The Contractor shall make no connections or splices of any kind in cables installed in conduits or duct banks.

Unless otherwise designated in the plans, where ducts are in tiers, use the lowest ducts to receive the cable first, with spare ducts left in the upper levels. Check duct routes prior to construction to obtain assurance that the shortest routes are selected and that any potential interference is avoided.

Duct banks or conduits shall be installed as a separate item per Item L-110, Airport Underground Electrical Duct Banks and Conduit. The Contractor shall run a mandrel through duct banks or conduit prior to installation of cable to ensure that the duct bank or conduit is open, continuous and clear of debris. The mandrel size shall be compatible with the conduit size. The Contractor shall swab out all conduits/ducts and clean light bases, manholes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed, the light bases and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, light bases, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be re-cleaned at the Contractor's expense. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

The cable shall be installed in a manner that prevents harmful stretching of the conductor, damage to the insulation, or damage to the outer protective covering. The ends of all cables shall be sealed with moisture-seal tape providing moisture-tight mechanical protection with minimum bulk, or alternately, heat shrinkable tubing before pulling into the conduit and it shall be left sealed until connections are made. Where more than one cable is to be installed in a conduit, all cable shall be pulled in the conduit at the same time. The pulling of a cable through duct banks or conduits may be accomplished by hand winch or power winch with the use of cable grips or pulling eyes. Maximum pulling tensions shall not exceed the cable manufacturer's recommendations. A non-hardening cable-pulling lubricant recommended for the type of cable being installed shall be used where required.

The Contractor shall submit the recommended pulling tension values to the RPR prior to any cable installation. If required by the RPR, pulling tension values for cable pulls shall be monitored by a dynamometer in the presence of the RPR. Cable pull tensions shall be recorded by the Contractor and reviewed by the RPR. Cables exceeding the maximum allowable pulling tension values shall be removed and replaced by the Contractor at the Contractor's expense.

The manufacturer's minimum bend radius or NEC requirements (whichever is more restrictive) shall apply. Cable installation, handling and storage shall be per manufacturer's recommendations. During cold weather, particular attention shall be paid to the manufacturer's minimum installation temperature. Cable shall not be installed when the temperature is at or below the manufacturer's minimum installation temperature. At the Contractor's option, the Contractor may submit a plan, for review by the RPR, for heated storage of the cable and maintenance of an acceptable cable temperature during installation when temperatures are below the manufacturer's minimum cable installation temperature.

Cable shall not be dragged across base can or manhole edges, pavement or earth. When cable must be coiled, lay cable out on a canvas tarp or use other appropriate means to prevent abrasion to the cable jacket.

108-3.3 INSTALLATION OF DIRECT-BURIED CABLE IN TRENCHES. (NOT USED) Unless otherwise specified, the Contractor shall not use a cable plow for installing the cable. Cable shall

be unreeled uniformly in place alongside or in the trench and shall be carefully placed along the bottom of the trench. The cable shall not be unreeled and pulled into the trench from one end. Slack cable sufficient to provide strain relief shall be placed in the trench in a series of S curves. Sharp bends or kinks in the cable shall not be permitted.

Where cables must cross over each other, a minimum of 3 inches vertical displacement shall be provided with the topmost cable depth at or below the minimum required depth below finished grade.

a. Trenching. Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored. Trenches for cables may be excavated manually or with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of surface is disturbed. Graders shall not be used to excavate the trench with their blades. The bottom surface of trenches shall be essentially smooth and free from coarse aggregate. Unless otherwise specified, cable trenches shall be excavated to a minimum depth of 18 inches below finished grade per NEC Table 300.5, except as follows:

- When off the airport or crossing under a roadway or driveway, the minimum depth shall be 36 inches unless otherwise specified.
- Minimum cable depth when crossing under a railroad track, shall be 42 inches unless otherwise specified.

The Contractor shall excavate all cable trenches to a width not less than 6 inches. Unless otherwise specified on the plans, all cables in the same location and running in the same general direction shall be installed in the same trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches below the required cable depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch sieve. Flowable backfill material may alternatively be used.

Duct bank or conduit markers temporarily removed for trench excavations shall be replaced as required.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

(1) Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred.

(2) Trenching, etc., in cable areas shall then proceed, with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair or replacement.

b. Backfilling. After the cable has been installed, the trench shall be backfilled. The first layer of backfill in the trench shall encompass all cables; be 3 inches deep, loose measurement; and shall be either earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch sieve. This layer shall not be compacted. The second layer shall be 5 inches deep, loose measurement, and shall contain no particles that would be retained on a one-inch sieve. The remaining third and subsequent layers of backfill shall not exceed 8 inches of loose

measurement and be excavated or imported material and shall not contain stone or aggregate larger than 4 inches maximum diameter.

The second and subsequent layers shall be thoroughly tamped and compacted to at least the density of the adjacent material. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be with controlled low strength material (CLSM) in accordance with P-153.

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 turbing 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 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 with controlled low strength material (CLSM) in accordance with P-153. 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. (NOT USED) The location of direct buried circuits shall be marked by a concrete slab marker, 2 feet square and 4-6-inch thick, extending approximately one inch above the surface. Each cable run from a line of lights and signs to the equipment vault shall be marked at approximately every 200 feet along the cable run, with an additional marker at each change of direction of cable run. All other direct-buried cable shall be marked in the same manner. Cable markers shall be installed directly above the cable. The Contractor shall impress the word "CABLE" and directional arrows on each cable marking slab. The letters shall be approximately 4 inches high and 3 inches wide, with width of stroke 1/2 inch and 1/4 inch deep. Stencils shall be used for cable marker lettering; no hand lettering shall be permitted.

At the location of each underground cable connection/splice, except at lighting units, or isolation transformers, a concrete marker slab shall be installed to mark the location of the connection/splice. The Contractor shall impress the word "SPLICE" on each slab. The Contractor also shall impress additional circuit identification symbols on each slab as directed by the RPR. All cable markers and splice markers shall be painted international orange. Paint shall be specifically manufactured for uncured exterior concrete. After placement, all cable or splice markers shall be given one coat of high-visibility aviation orange paint as approved by the RPR. Furnishing and installation of cable markers is incidental to the respective cable pay item.

108-3.5 SPLICING. Connections of the type shown on the plans shall be made by experienced personnel regularly engaged in this type of work and shall be made as follows:

a. Cast splices. These shall be made by using crimp connectors for jointing conductors. Molds shall be assembled, and the compound shall be mixed and poured per the manufacturer's instructions and to the satisfaction of the RPR.

b. Field-attached plug-in splices. These shall be assembled per the manufacturer's instructions. These splices shall be made by plugging directly into mating connectors. The joint where the connectors come together shall be finished by one of the following methods: (1) wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches on each side of the joint (2) Covered with heat shrinkable tubing with integral sealant extending at least 1-1/2 inches on each side of the joint or (3) On connector kits equipped with water seal flap; roll-over water seal flap to sealing position on mating connector.

c. Factory-molded plug-in splices. These shall be made by plugging directly into mating connectors. The joint where the connectors come together shall be finished by one of the following methods: (1) Wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches on each side of the joint. (2) Covered with heat shrinkable tubing with integral sealant extending at least 1-1/2 inches on each side of the joint. or (3) On connector kits so equipped with water seal flap; roll-over water seal flap to sealing position on mating connector.

d. Taped or heat-shrink splices. A taped splice shall be made in the following manner:

Bring the cables to their final position and cut so that the conductors will butt. Remove insulation and jacket allowing for bare conductor of proper length to fit compression sleeve connector with 1/4 inch of bare conductor on each side of the connector. Prior to splicing, the two ends of the cable insulation shall be penciled using a tool designed specifically for this purpose and for cable size and type. Do not use emery paper on splicing operation since it contains metallic particles. The copper conductors shall be thoroughly cleaned. Join the conductors by inserting them equidistant into the compression connection sleeve. Crimp conductors firmly in place with crimping tool that requires a complete crimp before tool can be removed. Test the crimped connection by pulling on the cable. Scrape the insulation to assure that the entire surface over which the tape will be applied (plus 3 inches on each end) is clean. After scraping, wipe the entire area with a clean lint-free cloth. Do not use solvents.

Apply high-voltage rubber tape one-half lapped over bare conductor. This tape should be tensioned as recommended by the manufacturer. Voids in the connector area may be eliminated by highly elongating the tape, stretching it just short of its breaking point. The manufacturer's recommendation for stretching tape during splicing shall be followed. Always attempt to exactly half-lap to produce a uniform buildup. Continue buildup to 1-1/2 times cable diameter over the body of the splice with ends tapered a distance of approximately one inch over the original jacket. Cover rubber tape with two layers of vinyl pressure-sensitive tape one-half lapped. Do not use glyptol or lacquer over vinyl tape as they react as solvents to the tape. No further cable covering or splice boxes are required.

Heat shrinkable tubing shall be installed following manufacturer's instructions. Direct flame heating shall not be permitted unless recommended by the manufacturer. Cable surfaces within the limits of the heat-shrink application shall be clean and free of contaminants prior to application.

e. Assembly. Surfaces of equipment or conductors being terminated or connected shall be prepared in accordance with industry standard practice and manufacturer's recommendations. All surfaces to be connected shall be thoroughly cleaned to remove all dirt, grease, oxides,

nonconductive films, or other foreign material. Paints and other nonconductive coatings shall be removed to expose base metal. Clean all surfaces at least 1/4 inch beyond all sides of the larger bonded area on all mating surfaces. Use a joint compound suitable for the materials used in the connection. Repair painted/coated surface to original condition after completing the connection.

108-3.6 BARE COUNTERPOISE WIRE INSTALLATION FOR LIGHTNING PROTECTION AND GROUNDING. If shown on the plans or included in the job specifications, bare solid #6 AWG copper counterpoise wire shall be installed for lightning protection of the underground cables. The RPR shall select one of two methods of lightning protection for the airfield lighting circuit based upon sound engineering practice and lightning strike density.

a. Equipotential. – may be used by the RPR for areas that have high rates of lightning strikes. The counterpoise size is determined by the RPR. The equipotential method is applicable to all airfield lighting systems; i.e. runway, taxiway, apron – touchdown zone, centerline, edge, threshold and approach lighting systems. The equipotential method is also successfully applied to provide lightning protection for power, signal and communication systems. The light bases, counterpoise, etc – all components - are bonded together and bonded to the vault power system ground loop/electrode.

Counterpoise wire shall be installed in the same trench for the entire length of buried cable, conduits and duct banks that are installed to contain airfield cables. The counterpoise is centered over the cable/conduit/duct to be protected.

The counterpoise conductor shall be installed no less than 8 inches minimum or 12 inches maximum above the raceway or cable to be protected, except as permitted below:

(1) The minimum counterpoise conductor height above the raceway or cable to be protected shall be permitted to be adjusted subject to coordination with the airfield lighting and pavement designs.

(2) The counterpoise conductor height above the protected raceway(s) or cable(s) shall be calculated to ensure that the raceway or cable is within a 45-degree area of protection, (45 degrees on each side of vertical creating a 90-degree angle).

The counterpoise conductor shall be bonded to each metallic light base, mounting stake, and metallic airfield lighting component.

All metallic airfield lighting components in the field circuit on the output side of the constant current regulator (CCR) or other power source shall be bonded to the airfield lighting counterpoise system.

All components rise and fall at the same potential; with no potential difference, no damaging arcing and no damaging current flow.

See AC 150/5340-30, Design and Installation Details for Airport Visual Aids and NFPA 780, Standard for the Installation of Lightning Protection Systems, Chapter 11, for a detailed description of the Equipotential Method of lightning protection.

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

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

The counterpoise conductor shall be installed 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 100 megohms. Verify continuity of all series airfield lighting circuits prior to energization.

f. That the insulation resistance to ground of all new non-grounded conductors of new multiple circuits or circuit segments is not less than 100 megohms.

g. That all affected circuits (existing and new) are properly connected per applicable wiring diagrams.

h. That all affected circuits (existing and new) are operable. Tests shall be conducted that include operating each control not less than 10 times and the continuous operation of each lighting and power circuit for not less than 1/2 hour.

i. That the impedance to ground of each ground rod does not exceed 25 ohms prior to establishing connections to other ground electrodes. The fall-of-potential ground impedance test shall be used, as described by American National Standards Institute/Institute of Electrical and

Electronic Engineers (ANSI/IEEE) Standard 81, to verify this requirement. As an alternate, clamp-on style ground impedance test meters may be used to satisfy the impedance testing requirement. Test equipment and its calibration sheets shall be submitted for review and approval by the RPR prior to performing the testing.

Two copies of tabulated results of all cable tests performed shall be supplied by the Contractor to the RPR. Where connecting new cable to existing cable, insulation resistance tests shall be performed on the new cable prior to connection to the existing circuit.

There are no approved "repair" procedures for items that have failed testing other than complete replacement.

METHOD OF MEASUREMENT

108-4.1 Cable or counterpoise wire installed in trench, duct bank or conduit shall be measured by the number of linear feet installed with primary connector kits, grounding conductor and grounding connectors ready for operation, and accepted by Owner / Engineer. Separate measurement shall be made for each single cable (1/C), cable pair (2/C) or feeder set, installed in duct bank or conduit with associated ground wire and connections included in Contractor's price. The measurement for this item shall include additional quantities required for slack (5' per end at cans, 15' per end at hand holes). No separate measurement will be made to multiply the number of individual conductors installed in a single conduit, in one installation effort.

108-4.2 Counterpoise wire and connections are considered incidental to the installation of duct bank or conduit, per item L-110. No separate payment will be made. Counterpoise repair item included for any repairs required to replace and exothermically splice existing counterpoise segments affected by infield grading and / or pavement base preparation where conduit or duct bank segment is not already being replaced or lowered as part of utility relocation items.

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

BASIS OF PAYMENT

108-5.1 Payment will be made at the contract unit price for cable and equipment ground installed in duct bank or conduit, in place by the Contractor and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all preparation and installation of these materials, and for all labor, equipment, tools, and incidentals, including ground rods and ground connectors and trench marking tape, necessary to complete this item.

Payment will be made under:

Item L-108-5.1	L-824, Type C, 1/C #8 AWG, 5kV Cable (w/ Bare #6 Stranded Cu. Ground) – per Linear Foot
Item L-108-5.2	L-824, Type C, 2/C #8 AWG, 5kV Cable (w/ Bare #6 Stranded Cu. Ground or Insulated for 480V Circuits) – per Linear Foot

Item L-108-5.3 Bare #6 Solid Copper Counterpoise Conductor with Two Each
Exothermic Splices (If Required - Existing Counterpoise Repair Item) –
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-110 AIRPORT UNDERGROUND ELECTRICAL DUCT BANKS AND CONDUITS

DESCRIPTION

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits. It shall also include all turfing trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

EQUIPMENT AND MATERIALS

110-2.1 GENERAL.

- a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.
- b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, that comply with these specifications, at the Contractor's cost.
- c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.
- d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.
- e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

110-2.2 STEEL CONDUIT. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories

Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be painted with a 10-mil thick coat of asphaltum sealer or shall have a factory-bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10 mils of asphaltum sealer. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer's written instructions. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth."

110-2.3 PLASTIC CONDUIT. Plastic conduit and fittings shall conform to the following requirements:

- UL 514B covers W-C-1094-Conduit fittings all types, classes 1 thru 3 and 6 thru 10.
- UL 514C covers W-C-1094- all types, Class 5 junction box and cover in plastic (PVC).
- UL 651 covers W-C-1094-Rigid PVC Conduit, types I and II, Class 4.
- UL 651A covers W-C-1094-Rigid PVC Conduit and high-density polyethylene (HDPE) Conduit type III and Class 4.

Underwriters Laboratories Standards UL-651 and Article 352 of the current National Electrical Code shall be one of the following, as shown on the plans:

- a. Type I—Schedule 40 and Schedule 80 PVC suitable for underground use either direct-buried or encased in concrete.
- b. Type II—Schedule 40 PVC suitable for either above ground or underground use.
- c. Type III – Schedule 80 PVC suitable for either above ground or underground use either direct-buried or encased in concrete.
- d. Type III –HDPE pipe, minimum standard dimensional ratio (SDR) 11, suitable for placement with directional boring under pavement.

The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.

110-2.4 SPLIT CONDUIT. Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

110-2.5 CONDUIT SPACERS. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high-grade, high-density polyethylene complete with interlocking cap and base pads. They shall be designed to accept No. 4 reinforcing bars installed vertically.

110-2.6 CONCRETE. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. Concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 25% Type F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa).

110-2.7 PRECAST CONCRETE STRUCTURES. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program. Precast concrete structures shall conform to ASTM C478.

110-2.8 FLOWABLE BACKFILL. Flowable material used to back fill conduit and duct bank trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

110-2.9 DETECTABLE WARNING TAPE. Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable), orange (telephone/fiber optic cabling) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches wide. Detectable tape is incidental to the respective bid item.

CONSTRUCTION METHODS

110-3.1 GENERAL. The Contractor shall install underground duct banks and conduits at the approximate locations indicated on the plans. The RPR shall indicate specific locations as the work progresses, if required to differ from the plans. Duct banks and conduits shall be of the size, material, and type indicated on the plans or specifications. Where no size is indicated on the plans or in the specifications, conduits shall be not less than 2 inches inside diameter or comply with the National Electrical Code based on cable to be installed, whichever is larger. All duct bank and conduit lines shall be laid so as to grade toward access points and duct or conduit ends for drainage. Unless shown otherwise on the plans, grades shall be at least 3 inches per 100 feet. On runs where it is not practicable to maintain the grade all one way, the duct bank and conduit lines shall be graded from the center in both directions toward access points or conduit ends, with a drain into the storm drainage system. Pockets or traps where moisture may accumulate shall be avoided. Under pavement, the top of the duct bank shall not be less than 18 inches below the subgrade; in other locations, the top of the duct bank or underground conduit shall be not less than 18 inches below finished grade.

The Contractor shall mandrel each individual conduit whether the conduit is direct-buried or part of a duct bank. An iron-shod mandrel, not more than 1/4 inch smaller than the bore of the conduit shall be pulled or pushed through each conduit. The mandrel shall have a leather or rubber gasket slightly larger than the conduit hole.

The Contractor shall swab out all conduits/ducts and clean base can, manhole, pull boxes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed the light bases, manholes, pull boxes, etc., and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be recleaned at the Contractor's expense. All accessible points shall be kept closed when not installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

For pulling the permanent wiring, each individual conduit, whether the conduit is direct-buried or part of a duct bank, shall be provided with a 200-pound test polypropylene pull rope. The ends shall be secured and sufficient length shall be left in access points to prevent it from slipping back into the conduit. Where spare conduits are installed, as indicated on the plans, the open ends shall be plugged with removable tapered plugs, designed for this purpose.

All conduits shall be securely fastened in place during construction and shall be plugged to prevent contaminants from entering the conduits. Any conduit section having a defective joint shall not be installed. Ducts shall be supported and spaced apart using approved spacers at intervals not to exceed 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, taxi-lanes, ramps and aprons. When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches below the required conduit or duct bank depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch sieve. Flowable backfill may alternatively be used.

Underground electrical warning (Caution) tape shall be installed in the trench above all underground duct banks and conduits in unpaved areas. Contractor shall submit a sample of the proposed warning tape for approval by the RPR. If not shown on the plans, the warning tape shall be located 6 inches above the duct/conduit or the counterpoise wire if present.

Joints in plastic conduit shall be prepared per the manufacturer's recommendations for the particular type of conduit. Plastic conduit shall be prepared by application of a plastic cleaner and brushing a plastic solvent on the outside of the conduit ends and on the inside of the couplings. The conduit fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly. Where more than one conduit is placed in a single trench, or in duct banks, joints in the conduit shall be staggered a minimum of 2 feet.

Changes in direction of runs exceeding 10 degrees, either vertical or horizontal, shall be accomplished using manufactured sweep bends.

Whether or not specifically indicated on the drawings, where the soil encountered at established duct bank grade is an unsuitable material, as determined by the RPR, the unsuitable material shall be removed per Item P-152 and replaced with suitable material. Additional duct bank supports shall be installed, as approved by the RPR.

All excavation shall be unclassified and shall be considered incidental to Item L-110. Dewatering necessary for duct installation, and erosion per federal, state, and local requirements is incidental to Item L-110.

Unless otherwise specified, excavated materials that are deemed by the RPR to be unsuitable for use in backfill or embankments shall be removed and disposed of offsite.

Any excess excavation shall be filled with suitable material approved by the RPR and compacted per Item P-152.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

- a.** Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred

- b. Trenching, etc., in cable areas shall then proceed with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair.

110-3.2 DUCT BANKS. Unless otherwise shown in the plans, duct banks shall be installed so that the top of the concrete envelope is not less than 18 inches below the bottom of the base or stabilized base course layers where installed under runways, taxiways, aprons, or other paved areas, and not less than 18 inches below finished grade where installed in unpaved areas.

Unless otherwise shown on the plans, duct banks under paved areas shall extend at least 3 feet beyond the edges of the pavement or 3 feet beyond any under drains that may be installed alongside the paved area. Trenches for duct banks shall be opened the complete length before concrete is placed so that if any obstructions are encountered, provisions can be made to avoid them. Unless otherwise shown on the plans, all duct banks shall be placed on a layer of concrete not less than 3 inches thick prior to its initial set. The Contractor shall space the conduits not less than 3 inches apart (measured from outside wall to outside wall). All such multiple conduits shall be placed using conduit spacers applicable to the type of conduit. As the conduit laying progresses, concrete shall be placed around and on top of the conduits not less than 3 inches thick unless otherwise shown on the plans. All conduits shall terminate with female ends for ease of access in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Conduits forming the duct bank shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches to anchor the assembly into the earth prior to placing the concrete encasement. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

When specified, the Contractor shall reinforce the bottom side and top of encasements with steel reinforcing mesh or fabric or other approved metal reinforcement. When directed, the Contractor shall supply additional supports where the ground is soft and boggy, where ducts cross under roadways, or where shown on the plans. Under such conditions, the complete duct structure shall be supported on reinforced concrete footings, piers, or piles located at approximately 5-foot intervals.

All pavement surfaces that are to have ducts installed therein shall be neatly saw cut to form a vertical face. All excavation shall be included in the contract with price for the duct.

Install a plastic, detectable, color as noted, 3 to 6 inches wide tape, 8 inches minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inch wide tape only for single conduit runs. Utilize the 6-inch wide tape for multiple conduits and duct banks. For duct banks equal to or greater than 24 inches in width, utilize more than one tape for sufficient coverage and identification of the duct bank as required.

When existing cables are to be placed in split duct, encased in concrete, the cable shall be carefully located and exposed by hand tools. Prior to being placed in duct, the RPR shall be notified so that he may inspect the cable and determine that it is in good condition. Where required, split duct shall be installed as shown on the drawings or as required by the RPR.

110-3.3 CONDUITS WITHOUT CONCRETE ENCASEMENT. Trenches for single-conduit lines shall be not less than 6 inches nor more than 12 inches wide. The trench for 2 or more conduits installed at the same level shall be proportionately wider. Trench bottoms for conduits without concrete encasement shall be made to conform accurately to grade so as to provide uniform support for the conduit along its entire length.

Unless otherwise shown on the plans, a layer of fine earth material, at least 4 inches thick (loose measurement) shall be placed in the bottom of the trench as bedding for the conduit. The bedding material shall consist of soft dirt, sand or other fine fill, and it shall contain no particles that would be retained on a 1/4-inch sieve. The bedding material shall be tamped until firm. Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport's secured area where trespassing is prohibited are at least 18 inches below the finished grade. Conduits outside the Airport's secured area shall be installed so that the tops of the conduits are at least 24 inches below the finished grade per National Electric Code (NEC), Table 300.5.

When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

110-3.4 MARKERS. The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet square and 4 - 6 inches thick extending approximately one inch above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet along the cable or duct run, with an additional marker at each change of direction of cable or duct run.

The Contractor shall impress the word "DUCT" or "CONDUIT" on each marker slab. Impression of letters shall be done in a manner, approved by the RPR, for a neat, professional appearance. All letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the RPR. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the RPR. The letters shall be 4 inches high and 3 inches wide with

width of stroke 1/2 inch and 1/4-inch deep or as large as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

110-3.5 BACKFILLING FOR CONDUITS. For conduits, 8 inches of sand, soft earth, or other fine fill (loose measurement) shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted per Item P-152 except that material used for back fill shall be select material not larger than 4 inches in diameter.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.6 BACKFILLING FOR DUCT BANKS. After the concrete has cured, the remaining trench shall be backfilled and compacted per Item P-152 "Excavation and Embankment" except that the material used for backfill shall be select material not larger than 4 inches in diameter. In addition to the requirements of Item P-152, where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet of duct bank or one work period's construction, whichever is less.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.7 RESTORATION. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The restoration shall include sodding, top-soiling, fertilizing, liming, seeding, or mulching as shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. All restoration shall be considered incidental to the respective L-110 pay item. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD) and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

110-3.8 OWNERSHIP OF REMOVED CABLE. Removed cable may become property of the Contractor and recycled or disposed of off-site, in accordance with local ordinances (as specified in L-100).

METHOD OF MEASUREMENT

110-4.1 MEASUREMENT. Underground conduits and duct banks shall be measured by the linear feet of conduits and duct banks installed, including encasement, counterpoise conductor, ground rods and connections, locator tape, trenching and backfill with designated material and for drain lines, the termination at the drainage structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.

Measurement of 3" minimum / 6" maximum concrete cap installed over existing duct bank only applicable to existing conduits found to be within 3" of the 18" minimum depth below modified grade, as determined by RPR. Placement of concrete cap shall be approved and include excavation to expose existing conduits and counterpoise segment, placement of concrete and restoration after concrete has set.

BASIS OF PAYMENT

110-5.1 PAYMENT. Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, for drain lines and the termination at the drainage structure. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications.

Payment will be made under:

Item L-110-5.1	Single-way, (1) - 2" Conduit, Slurry Encased (If Required - Utility Relocation Item) – per Linear Foot
Item L-110-5.2	Multiple-way, (2) - 2" Conduit, Slurry Encased (If Required - Utility Relocation Item) – per Linear Foot
Item L-110-5.3	Multiple-way, (4) - 2" Conduit, Slurry Encased (If Required - Utility Relocation Item) – per Linear Foot
Item L-110-5.4	Multiple-way, (6) - 2" Conduit, Slurry Encased (If Required - Utility Relocation Item) – per Linear Foot
Item L-110-5.5	Multiple-way, (2) - 4" Conduit, Slurry Encased (If Required - Utility Relocation Item) – per Linear Foot
Item L-110-5.6	3" Min / 6" Max Concrete Cap (If Top of Existing Conduits Are Within 3" of 18" Minimum Depth Below Modified Grade) – per Linear Foot

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circular (AC)

AC 150/5340-30 Design and Installation Details for Airport Visual Aids

AC 150/5345-53 Airport Lighting Equipment Certification Program

ASTM International (ASTM)

ASTM A615 Standard Specification for Deformed and Plain Carbon-Steel Bars for
Concrete Reinforcement

National Fire Protection Association (NFPA)

NFPA-70 National Electrical Code (NEC)

Underwriters Laboratories (UL)

UL Standard 6 Electrical Rigid Metal Conduit - Steel

UL Standard 514B Conduit, Tubing, and Cable Fittings

UL Standard 514C Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers

UL Standard 1242 Electrical Intermediate Metal Conduit Steel

UL Standard 651 Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings

UL Standard 651A Type EB and A Rigid PVC Conduit and HDPE Conduit

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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 Engineer. 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 Engineer.

EQUIPMENT AND MATERIALS

115-2.1 General.

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 Engineer.

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 Engineer) and replaced with materials that comply with these specifications at the Contractor's cost.

All materials and equipment used to construct this item shall be submitted to the Engineer 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.

The data submitted shall be sufficient, in the opinion of the Engineer, to determine compliance with the plans and specifications. The Contractor's submittals shall be Electronic PDF, labeled and tabbed by specification section. The Engineer 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.

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. Cast-in-place concrete structures are not used.

Provide precast concrete structures where shown on the plans. Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand **100,000** lbs. 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.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the Engineer shall be submitted by the Contractor to allow for a full evaluation by the Engineer. The Engineer shall review per the process defined in the General Provisions.

115-2.3 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 galvanized steel blank cover, gasket, and stainless steel or coated steel hardware per FAA Engineering Brief (EB) #83. Covers shall be 3/8-inch thickness for L-867 and 3/4-inch thickness for L-868.

115-2.4 Mortar. The mortar shall be composed of one part of Portland cement and two parts of mortar sand, by volume. The Portland 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 C6. Water shall be potable, reasonably clean, and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

115-2.5 Concrete. All concrete used in structures shall conform to the requirements of Item P-610, Structural Portland Cement Concrete.

115-2.6 Frames and Covers. The frames shall conform to one of the following requirements:

a. ASTM A48	Gray iron castings
b. ASTM A47	Malleable iron castings
c. ASTM A27	Steel castings
d. ASTM A283, Grade D	Structural steel for grates and frames
e. ASTM A536	Ductile iron castings
f. ASTM A897	Austempered ductile iron castings

All castings specified shall withstand a maximum tire pressure of **125** psi and maximum load of **100,000** lbs.

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word "**ELECTRIC**" or other approved designation cast on it. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a "**DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER**" safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

115-2.7 Ladders. Ladders, if specified, shall be galvanized steel or as shown on the plans.

115-2.8 Reinforcing Steel. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A615, Grade 60.

115-2.9 Bedding/Special Backfill. Bedding or special backfill shall be as shown on the plans.

115-2.10 Flowable Backfill. Flowable material used to backfill shall conform to the requirements of Item P-153, Controlled Low Strength Material.

115-2.11 Cable Racks. Cable Racks shall be of non-conductive plastic. Cable racks shall be located as shown on the plans.

115-2.12 Plastic Conduit. Plastic conduit shall comply with Item L-110, Airport Underground Electrical Duct Banks and Conduits.

115-2.13 Conduit Terminators. Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

115-2.14 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 (1862 MPa)). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

115-2.15 Ground Rods. Ground rods shall be one piece, copper clad. The ground rods shall be of the length and diameter specified on the plans, but in no case shall they be less than 10 feet long nor less than 3/4 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 Engineer 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 Engineer. 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 the respective L-115 pay item of which it is a component part. Dewatering necessary for L-115 structure installation, erosion and turbidity control, per Federal, state, and local requirements is incidental to its respective pay item as a part of Item L-115. The cost of all excavation regardless of type of material encountered, shall be included in the unit price bid for the L-115 Item.

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 Engineer. 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 Engineer. Structures shall be placed after the Engineer has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 12 inches of $\frac{3}{4}$ " gravel or a material approved by the Engineer 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 Engineer 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 Engineer 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 permission 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 Engineer 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. Not Used.

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 Engineer may order 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 Engineer.

Backfill shall not be placed against any structure until permission is given by the Engineer. In the case of concrete, such permission shall not be given until tests made by the laboratory under supervision of the Engineer 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 Engineer may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property, or persons due to improper placing or compacting of backfill.

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 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 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 the 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 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 then 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. Finally, 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 New 4'x4'x4' Aircraft Rated Hand Hole and Lid with Cylinder Assited Opening Hatch. Precast Electrical manholes, junction structures or junction boxes and cans 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 Reconfigure RGL Isolation Boxes and Conduits in Existing Lowered Handhole (If Required - Utility Relocation Item). This item shall include the reconfiguration to lower the existing PVC boxes and PVC conduit or flexible liquid tight conduit and fittings for housing all RGL circuit cables and L-823 connections within the existing structures, if required for elevation adjustments. This item shall be measured by each unit completed in place and accepted.

115-4.3 New RGL Isolation Boxes and Conduits in New Handhole. This item shall include the installation of new PVC boxes and PVC conduit or flexible liquid tight conduit and fittings for housing all RGL circuit cables and L-823 connections within the new structures. This item shall be measured by each unit completed in place and accepted.

115-4.3 New Handhole Identification Plaque Installed on Handhole Lid. Installation of new hand hole ID Plaques shall be measured by each unit completed in place and accepted.

115-4.4 Adjust Existing Electrical Junction Box to New Grade. Adjusting elevations of existing electrical junction boxes to new grade 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 restoration of all surfaces and finished paving.

BASIS OF PAYMENT

115-5.1 The accepted quantity of electrical manholes and junction structures will be paid for at the Contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools, and incidentals necessary to complete the structure.

Payment will be made under:

Item L-115-5.1	New 4'x4'x4' Aircraft Rated Hand Hole and Lid with Cylinder Assisted Opening Hatch - Per Each
Item L-115-5.2	Reconfigure RGL Isolation Boxes and Conduits in Existing Lowered Handhole (If Required - Utility Relocation Item) - Per Each
Item L-115-5.3	New RGL Isolation Boxes and Conduits in New Handhole - Per Each
Item L-115-5.4	New Handhole Identification Plaque Installed on Handhole Lid - Per Each
Item L-115-5.5	Adjust Existing Electrical Junction Box to New Grade - Per Each

MATERIAL REQUIREMENTS

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

Advisory Circular

(AC) 150/5345-7 Specifications 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

A-A 59544	Cable and Wire, Electrical (Power, Fixed Installation)
ASTM A27 Application	Standard Specification for Steel Castings, Carbon, for General
ASTM A47	Standard Specification for Ferritic Malleable Iron Castings
ASTM A48	Standard Specification for Gray Iron Castings
ASTM A123 and Steel Products	Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron
ASTM A283 Steel Plates	Standard Specification for Low and Intermediate Tensile Strength Carbon
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 EB #83	In Pavement Light Fixture Bolts
MIL-P-21035	Paint High Zinc Dust Content, Galvanizing Repair
NFPA-70	National Electrical Code (NEC)

END OF ITEM L-115

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ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS

DESCRIPTION

125-1.1 This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

125-2.1 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.
- f. All LED light fixtures, with the exception of obstruction lighting (AC 150/5345-43) must be warranted by the manufacturer for a minimum of 4 years after date of installation inclusive of all electronics." Obstruction lighting warranty is set by the individual manufacturer.

EQUIPMENT AND MATERIALS

125-2.2 CONDUIT/DUCT. Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.

125-2.3 CABLE AND COUNTERPOISE. Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.

125-2.4 TAPE. Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.

125-2.5 CABLE CONNECTIONS. Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.

125-2.6 RETROREFLECTIVE MARKERS. Retroreflective markers shall be type L-853 and shall conform to the requirements of AC 150/5345-39.

125-2.7 RUNWAY AND TAXIWAY LIGHTS. Reinstall existing RGL or taxiway lights on existing or new L-867 Base as shown in plans.

125-2.8 RUNWAY AND TAXIWAY SIGNS. Reinstall existing size 2 signs on new concrete sign bases and ground as shown in plans.

125-2.9 RUNWAY END IDENTIFIER LIGHT (REIL). Not Required

125-2.10 PRECISION APPROACH PATH INDICATOR (PAPI). Not Required

125-2.11 CIRCUIT SELECTOR CABINET. Not Required

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 and extensions shall be Type L-867, 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. All bolts used for securing light fixtures and covers to light bases shall be Grade 5 Fluoropolymer coated with stainless steel split style, one-piece lock washers, per COP Airfield Maintenance Standards.

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.

Grade 5 coated bolts with stainless steel split style washers shall be supplied and used to secure all elevated and in-pavement light fixtures to base cans and shall be of sufficient length to provide full thread engagement through all spacer rings (3 maximum), flanges and multi-hole adapter rings with at least three threads exposed at bottom of base can flange. Bolts for in-pavement lights shall be torqued to 25ft pounds, per COP Airfield Maintenance Standards.

METHOD OF MEASUREMENT

125-4.1 Install Salvaged Size 2, 2-Mod Sign and Isolation Transformer on New Sign Base will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR.

Install Salvaged Size 2, 3-Mod Sign and Isolation Transformer on New Sign Base will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR.

Install Salvaged Taxiway Edge Light and Isolation Transformer on New L-867 Base will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR.

Install Salvaged Taxiway Edge Light and Isolation Transformer on Existing Base will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR.

Install Salvaged Runway Guard Light and Isolation Transformer on New L-867 Base will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR.

Install 3" L-867B Extension on Existing Base with New Gaskets, Coated Bolts and Split Washers for Elevation Adjustment (If Required - Utility Relocation Item) will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR.

BASIS OF PAYMENT

125-5.1 Payment will be made at the Contract unit price for each complete runway or taxiway light, guidance sign or reflective marker installed by the Contractor and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation,

assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

Item L-125-5.1	Install Salvaged Size 2, 2-Mod Sign and Isolation Transformer on New Sign Base - Per Each
Item L-125-5.2	Install Salvaged Size 2, 3-Mod Sign and Isolation Transformer on New Sign Base - Per Each
Item L-125-5.3	Install Salvaged Taxiway Edge Light and Isolation Transformer on New L-867 Base - Per Each
Item L-125-5.4	Install Salvaged Taxiway Edge Light and Isolation Transformer on Existing Base - Per Each
Item L-125-5.5	Install Salvaged Runway Guard Light and Isolation Transformer on New L-867 Base - Per Each
Item L-125-5.6	Install 3" L-867B Extension on Existing Base with New Gaskets, Coated Bolts and Split Washers for Elevation Adjustment (If Required - Utility Relocation Item) - Per Each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-18	Standards for Airport Sign Systems
AC 150/5340-26	Maintenance of Airport Visual Aid Facilities
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 150/5345-46	Specification for Runway and Taxiway Light Fixtures
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
Engineering Brief (EB)

EB No. 67

Airport Lighting Equipment Certification Program

Light Sources Other than Incandescent and Xenon for Airport and
Obstruction Lighting Fixtures

END OF ITEM L-125

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SECTION III-E

GEOTECHNICAL INVESTIGATION REPORT

DESCRIPTION

1.1 GENERAL. The Owner did not authorize a geotechnical investigation for this project. The purpose of this project is to mitigate FOD generated by the infield areas. The paving performed is not intended to be subjected to aircraft loading. The paving methods, section, and subgrade preparation is intended to be consistent with historic practices at other infield areas on airports owned by the Owner.

SECTION III-F

AIRPORT CONSTRUCTION SAFETY AND PHASING PLAN

DESCRIPTION

1.1 GENERAL. The following is the Airport Construction Safety and Phasing Plan. The Contractor shall provide all information necessary to complete the plan and submit that information to the Airport and Engineer.

CONSTRUCTION SAFETY PHASING PLAN (CSPP)

GYR INFIELD PAVING PHASE II

AUGUST 29, 2025

COP Project No.:	AV41000079 ADOT
ADOT Grant No.:	E3S2I 01C & E4SSM 01C & E5S5D 01C

PREPARED FOR:

THE CITY OF PHOENIX AVIATION DEPARTMENT
PHOENIX-GOODYEAR AIRPORT



1658 S. LITCHFIELD ROAD
GOODYEAR, AZ 85338

PREPARED BY:



1201 E. JEFFERSON ST, STE 3
PHOENIX, AZ 85034

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APPENDICES

Appendix A: Phasing Plans

Appendix B: Barricade Examples

1. COORDINATION

Aviation safety is the primary consideration at airports, especially during construction. This Construction Safety and Phasing Plan (CSPP) will serve as a companion document to the project plans and specifications for the Infield Paving Phase II project (Project), at Phoenix-Goodyear Airport (GYR) and is intended to comply with FAA AC 150/5370-2G, Operational Safety on Airports During Construction, dated December 13, 2017. The phasing developed for this project is intended to minimize the impact the project will have on the airport while providing a logical sequence of construction activities. The subsequent sections of this document will address scheduling, coordination, and airfield safety precautions as they relate to the project.

GYR, by authority from the Federal Aviation Administration (FAA) is tasked with ensuring federal regulations and standards are enforced and complied with. In addition to these federal requirements, GYR has established rules and regulations backed by Civil Code which are enforced to ensure safe and secure operations at GYR. Airside Operations staff authorized with enforcement of these rules and regulations must be strictly obeyed at all times while working at GYR. All contractors operating on the airfield must recognize and abide by this authority.

Scope of Work

The major items associated with the scope for this project are as follows:

- Infield grading to meet grading requirements per current FAA Standards as set forth in FAA AC 150/5300-13B Change 1, dated August 16, 2024.
- Infield paving to minimize Foreign Object Debris (FOD) generations and eliminate vegetation growth in the infield areas.
- Utility vault adjustments to be consistent with the new grading and paving (vertical adjustments only).
- Storm drain system modifications to be consistent with the new grading and paving and to improve infield transverse slopes according to FAA AC 150/5300-13B Change 1.

Prior to the start of any construction operations on the airfield, a pre-construction meeting will be scheduled in order to discuss operational safety, phasing, quality control/quality acceptance, labor requirements, and potential issues that could arise during construction. A general outline of topics that will be discussed at the meeting include, but are not limited to the items listed below:

1. Project Overview and Safety Items
2. Construction Items
3. Labor Requirements
4. Civil Rights Requirements

1.a CONTRACTOR PROGRESS MEETINGS

Progress meeting will be held on a weekly basis and will be conducted by the City of Phoenix Project Manager of this project. These meetings will be attended by the Contractor, the Construction Manager, and City staff to discuss operational safety, scheduling, testing, quality control, quality acceptance, security, safety, labor requirements, and environmental factors

1.b SCOPE OR SCHEDULE CHANGES

Scope and schedule changes will be discussed as needed during Weekly Construction Progress Meetings. Changes to the project scope or schedule that necessitate revisions to the CSPP shall require review and approval by the City of Phoenix and the FAA.

1.c FAA ATO COORDINATION

FAA ATO coordination will be performed by the City of Phoenix for this project.

2. SCHEDULING OF CONSTRUCTION PHASING

2.a Phasing Elements

2.a.1. Phase 1 Activities

Phase 1 activities generally consist of pavement sawcut, existing asphalt removal, grading and earthwork, and subgrade compaction in the 35-foot-wide sections along the northwest edge of the AN1, AN2, AN6, AN8, and AN10 infields, and the application of herbicide in the entirety of the AN1, AN2, AN5, AN6, AN7, AN8, and AN10 infields.

Phase 1 will be completed with night work and will require restrictions to aircraft operations including nightly closures of Runway 3-21. The closure shall be coordinated between the Contractor and GYR Airport Operations Staff. Aircraft should not be operating within the movement area. The Contractor shall coordinate with GYR Operations Staff for any aircraft taxiing movements. Work completed within the RSA limits of the unrestricted Runway 3-21 condition during the closures will need to be completed to a level such that Runway 3-21 may be reopened to full operations upon completion of the shift and still maintain compliance with FAA AC 150/5370-2G requirements.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

The work area for the construction activities in the AN1 and AN2 infields are bounded by the Taxiway A2 connector, the northeast edge of the AN1 infield, Runway 3-21, and Taxiway A. The Contractor will access the airfield through Gate 3 or Gate 10 off Yuma Road. The Contractor will utilize the area northeast of the runway area near Gate 3 to access the AN1 infield and will utilize the Taxiway A1 connector to access AN2 infield from the AN1 infield.

The work area for the construction activities in the AN6 infield is bounded by the Taxiway A5 and Taxiway A6 connectors, Runway 3-21, and Taxiway A. The Contractor will access

the airfield through Gate 2 off Goodyear Parkway and utilize the vehicle service road to head towards Taxiway A near infield AN7 or AN10. The Contractor will utilize the Taxiway A6 connector to access the AN6 infield from the AN7 infield. The work area for the construction activities in the AN8 infield is bounded by the Taxiway A7 and Taxiway A8 connectors, Runway 3-21, and Taxiway A. The Contractor will utilize the Taxiway A7 connector to access the AN8 infield from the AN7 infield. The work area for the construction activities in the AN10 infield is bounded by the Taxiway A9 and Taxiway A10 connectors, Runway 3-21, and Taxiway A. It is not anticipated that there will be any aircraft movements on Taxiway A or any of the connector taxiways. Any aircraft taxiing movements shall be coordinated between the Contractor and GYR Operations. The Contractor will be required to coordinate with GYR Airport Operations Staff in order to facilitate crossing Taxiway A and the aforementioned connector taxiways to access the work areas and to ensure compliance with FAA AC 150/5370-2G is maintained. It is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

Construction duration is shown on the Phasing Plans.

2.a.2. Phase 2 Activities

Phase 2 activities will begin after the completion of Phase 1, and a 30-day waiting period for the herbicide applied in Phase 1 is complete. Phase 2 activities generally consist of pavement sawcut, grading and earthwork, excavation for and installation of pipe and storm drain structures, and subgrade compaction in the AN1 and AN2 infields, excluding the portion of the AN1 and AN2 infield within 135-feet from Runway 3-21's centerline.

Phase 2 will be completed with night work and will require restrictions to aircraft operations including: Runway 3-21 restricted to RDC B-I aircraft, all taxiways restricted to ADG I aircraft, and Taxiway A1 closed. The nighttime work and aircraft restrictions will be between the hours of 10:00pm and 5:00am. Work within the ROFA will be permitted with approval from Airport Operations, and equipment will be allowed if it is actively being used; otherwise, it shall be relocated outside of the ROFA. No construction will occur within the Runway Safety Area (RSA) or the Runway Obstacle Free Zone (ROFZ) for the restricted Runway 3-21. Work completed within the RSA limits for the unrestricted Runway 3-21 condition during nighttime work will need to be completed to a level such that Runway 3-21 may be reopened to full operation upon completion of the shift and still maintain compliance with FAA AC 150/5370-2G requirements. If backfilling excavations before the runway must be opened is impracticable, the cover for the trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

The work area for the construction activities in the AN1 and AN2 infields are bounded by the Taxiway A2 connector, the northeast edge of the AN1 infield, 135-feet offset from

Runway 3-21's centerline, and Taxiway A. The Taxiway A1 connector will be closed during this phase and will be used by the Contractor to access the AN2 infield from the AN1 infield. Taxiway A will remain open during this phase. The Contractor will be required to coordinate with GYR Airport Operations Staff in order to facilitate crossing the active Taxiway A to the work area and to ensure compliance with FAA AC 150/5370-2G is maintained. It is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

Construction duration is shown in the Phasing Plans.

2.a.3. Phase 3 Activities

Phase 3 activities will begin after the completion of Phase 2. Phase 3 activities generally consist of pavement sawcut, grading and earthwork, excavation for and installation of pipe and storm drain structures, and subgrade compaction in the AN5, AN6, AN7, and AN8 infields, excluding the portion of the AN6 and AN8 infields within 135-feet from Runway 3-21's centerline.

Phase 3 will be completed with night work and will require restrictions to aircraft operations including Runway 3-21 restricted to RDC B-I aircraft and all taxiways restricted to ADG I aircraft. The nighttime work and aircraft restrictions will be between the hours of 10:00pm and 5:00am. Work within the ROFA will be permitted with approval from Airport Operations, and equipment will be allowed if it is actively being used; otherwise, it shall be relocated outside of the ROFA. No construction will occur within the RSA or ROFZ for the restricted Runway 3-21. Work completed within the RSA limits for the unrestricted Runway 3-21 condition during nighttime work will need to be completed to a level such that Runway 3-21 may be reopened to full operation upon completion of the shift and still maintain compliance with FAA AC 150/5370-2G requirements. If backfilling excavations before the runway must be opened is impracticable, the cover for the trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

The work area is bounded by the Taxiway A4 and Taxiway A8 connectors, 135-feet offset from Runway 3-21's centerline, and Taxiway A. The Taxiway A5, A6, and A7 connectors will be closed during this phase and will be used by the Contractor to access the AN5, AN6, and AN8 infields from the AN7 infield. Taxiway A will remain open during this phase. The Contractor will be required to coordinate with GYR Airport Operations Staff in order to facilitate crossing the active Taxiway A to the work area and to ensure compliance with FAA AC 150/5370-2G is maintained. It is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

Construction duration is shown on the Phasing Plans.

2.a.4. Phase 4 Activities

Phase 4 activities will begin after the completion of Phase 3. Phase 4 activities generally consist of pavement sawcut, grading and earthwork, excavation for and installation of pipe and storm drain structures, and subgrade compaction in the AN10 infield, excluding the portion of the AN10 infield within 135-feet from Runway 3-21's centerline.

Phase 4 will be completed with night work and will require restrictions to aircraft operations including Runway 3-21 restricted to RDC B-I aircraft and all taxiways restricted to ADG I aircraft. The nighttime work and aircraft restrictions will be between the hours of 10:00pm and 5:00am. Work within the ROFA will be permitted with approval from Airport Operations, and equipment will be allowed if it is actively being used; otherwise, it shall be relocated outside of the ROFA. No construction will occur within the RSA or ROFZ for the restricted Runway 3-21. Work completed within the RSA limits for the unrestricted Runway 3-21 condition during nighttime work will need to be completed to a level such that Runway 3-21 may be reopened to full operation upon completion of the shift and still maintain compliance with FAA AC 150/5370-2G requirements. If backfilling excavations before the runway must be opened is impracticable, the cover for the trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

The work area is bounded by the Taxiway A9 and Taxiway A10 connectors, 135-feet offset from Runway 3-21's centerline, and Taxiway A. Taxiway A will remain open during this phase. The Contractor will be required to coordinate with GYR Airport Operations Staff in order to facilitate crossing the active Taxiway A to the work area and to ensure compliance with FAA AC 150/5370-2G is maintained. It is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

Construction duration is shown on the Phasing Plans.

2.a.5. Phase 5A Activities

Phase 5A activities begin after the completion of Phase 4. Phase 5A activities generally consist of infield paving in the AN1 and AN2 infields, excluding the portion of the AN1 and AN2 infields within Phase 5D's work area.

Phase 5A will be completed in the daytime when outside the restricted RSA limits and with approval from Airport Operations. Restrictions to aircraft operations required for Phase 5A include Runway 3-21 restricted to RDC B-I aircraft and all taxiways restricted to ADG I aircraft. The daytime work and aircraft restriction will be between the hours of 6:00am and 6:00pm. Work within the ROFA will be permitted with approval from Airport Operations, and equipment will be allowed if it is actively being used; otherwise, it shall be relocated outside of the ROFA. No construction will occur within the RSA or ROFZ for the restricted Runway 3-21. Work completed within the RSA limits of the unrestricted Runway 3-21 condition during daytime work will need to be completed to a level such that Runway 3-21

may be reopened to full operation upon completion of the shift and still maintain compliance with FAA AC 150/5370-2G requirements.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

The work area for the construction activities in the AN1 and AN2 infields are bounded by the Taxiway A2 connector, the northeast edge of the AN1 infield, 135-foot offset from Runway 3-21's centerline, and Taxiway A. The Taxiway A1 connector will be closed during this phase and will be used by the Contractor to access the AN2 infield from the AN1 infield. Taxiway A will remain open during this phase. The Contractor will be required to coordinate with GYR Airport Operations Staff in order to facilitate crossing the active Taxiway A to the work area and to ensure compliance with FAA AC 150/5370-2G is maintained. It is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

Construction duration is shown on the Phasing Plans.

2.a.6. Phase 5B Activities

Phase 5B activities begin after the completion of Phase 5A. Phase 5A activities generally consist of infield paving in the AN5, AN6, AN7, and AN8 infields, excluding the portion of the AN6 and AN8 infields within Phase 5D's work area.

Phase 5B will be completed in the daytime when outside the restricted RSA limits and with approval from Airport Operations. Restrictions to aircraft operations required for Phase 5B include Runway 3-21 restricted to RDC B-I aircraft and all taxiways restricted to ADG I aircraft. The daytime work and aircraft restriction will be between the hours of 6:00am and 6:00pm. Work within the ROFA will be permitted with approval from Airport Operations, and equipment will be allowed if it is actively being used; otherwise, it shall be relocated outside of the ROFA. No construction will occur within the RSA or ROFZ for the restricted Runway 3-21. Work completed within the RSA limits of the unrestricted Runway 3-21 condition during daytime work will need to be completed to a level such that Runway 3-21 may be reopened to full operation upon completion of the shift and still maintain compliance with FAA AC 150/5370-2G requirements.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

The work area for the construction activities in the AN5, AN6, AN7, and AN8 infields are bounded by the Taxiway A4 and Taxiway A8 connectors, 135-foot offset from Runway 3-21's centerline, and Taxiway A. The Taxiway A5, Taxiway A6, and Taxiway A7 connectors will be closed during this phase and will be used by the Contractor to access the AN5, AN6 and AN8 infields from the AN7 infield. Taxiway A will remain open during this phase. The Contractor will be required to coordinate with GYR Airport Operations Staff in order to facilitate crossing the active Taxiway A to the work area and to ensure compliance with

FAA AC 150/5370-2G is maintained. It is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

Construction duration is shown on the Phasing Plans.

2.a.1. Phase 5C Activities

Phase 5C activities begin after the completion of Phase 5B. Phase 5C activities generally consist of infield paving in the AN10 infield excluding the portion of the AN10 infield within Phase 5D's work area.

Phase 5C will be completed in the daytime when outside the restricted RSA limits and with approval from Airport Operations. Restrictions to aircraft operations required for Phase 5C include Runway 3-21 restricted to RDC B-I aircraft and all taxiways restricted to ADG I aircraft. The daytime work and aircraft restriction will be between the hours of 6:00am and 6:00pm. Work within the ROFA will be permitted with approval from Airport Operations, and equipment will be allowed if it is actively being used; otherwise, it shall be relocated outside of the ROFA. No construction will occur within the RSA or ROFZ for the restricted Runway 3-21. Work completed within the RSA limits of the unrestricted Runway 3-21 condition during daytime work will need to be completed to a level such that Runway 3-21 may be reopened to full operation upon completion of the shift and still maintain compliance with FAA AC 150/5370-2G requirements.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

The work area for the construction activities in the AN10 infield is bounded by the Taxiway A9 and Taxiway A10 connectors, 135-feet offset from Runway 3-21's centerline, and Taxiway A. Taxiway A will remain open during this phase. The Contractor will be required to coordinate with GYR Airport Operations Staff in order to facilitate crossing the active Taxiway A to the work area and to ensure compliance with FAA AC 150/5370-2G is maintained. It is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

Construction duration is shown on the Phasing Plans.

2.a.1. Phase 5D Activities

Phase 5D activities begin after the completion of Phase 5C. Phase 5D activities generally consist of infield paving in the 35-foot-wide sections along the northwest edge of the AN1, AN2, AN5, AN6, AN7, AN8 and AN10 infields.

Phase 5D will be completed in the daytime and will require restrictions to aircraft operations including daytime closures of Runway 3-21. The closure shall be coordinated between the Contractor and GYR Airport Operation Staff. Aircraft should not be operating within the movement area during the closure. The Contractor shall coordinate with GYR Operations Staff for any aircraft taxiing movements. The daytime work and Runway 3-21 closure will be between the hours of 6:00am and 6:00pm. Work completed within the RSA

limits of the unrestricted Runway 3-21 condition during daytime work will need to be completed to a level such that Runway 3-21 may be reopened to full operation upon completion of the shift and still maintain compliance with FAA AC 150/5370-2G requirements.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

The work area for the construction activities in the AN1 and AN2 infields are bounded by the Taxiway A2 connector, the northeast edge of the AN1 infield, Runway 3-21, and 135-foot offset from Runway 3-21's centerline. The Contractor will utilize the area northeast of the runup area near Gate 3 to access the AN1 infield and will utilize the Taxiway A1 connector to access AN2 infield from the AN1 infield. The work area for the construction activities in the AN6 infield is bounded by the Taxiway A5 and Taxiway A6 connectors, Runway 3-21, and 135-foot offset from Runway 3-21's centerline. The Contractor will utilize the Taxiway A6 connector to access the AN6 infield from the AN7 infield. The work area for the construction activities in the AN8 infield is bounded by the Taxiway A7 and Taxiway A8 connectors, Runway 3-21, and 135-foot offset from Runway 3-21's centerline. The Contractor will utilize the Taxiway A7 connector to access the AN8 infield from the AN7 infield. The work area for the construction activities in the AN10 infield is bounded by the Taxiway A9 and Taxiway A10 connectors, Runway 3-21, and 135-foot offset from Runway 3-21's centerline. It is not anticipated that there will be any aircraft movements on Taxiway A or any of the connector taxiways. Any aircraft taxiing movements shall be coordinated between the Contractor and GYR Operations. The Contractor will be required to coordinate with GYR Airport Operations Staff in order to facilitate crossing Taxiway A and the aforementioned connector taxiways to access the work areas and to ensure compliance with FAA AC 150/5370-2G is maintained. It is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

Construction duration is shown on the Phasing Plans.

2.b Construction Safety Drawings

Initial project construction phasing drawings describing the phases and activities in paragraphs above are included as Appendix A of this CSPP.

The selected contractor shall provide a detailed schedule of work for each phase and the overall project.

3. AREAS OF OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

3.a Identification of Affected Areas

This project involves the grading and paving of the AN1, AN2, AN5, AN6, AN7, AN8, and AN10 infields at GYR along with modifications to the storm drain network and vertical adjustments of existing utility vaults in order to be consistent with the new grading and improve slopes in accordance with FAA AC 150/5300-13B standards. Construction

activities will occur in these infields which are shown in initial phasing drawings in Appendix A. Nighttime shifts will be primarily used for all work except for paving operations which will occur during daytime shifts. Aircraft operations will be restricted for all phases during construction activities but will be restored to full operational condition at the end of each shift. Phase 1 will require the closure of the Taxiway A1, Taxiway A5, Taxiway A6, and Taxiway A7 connectors for the duration of work activities in the project area. These connectors may be open during the 30-day waiting period following the application of herbicide. Phase 2 and 5A will require the closure of the Taxiway A1 connector for the entirety of the phase duration. Phase 3 and 5B will require the closure of the Taxiway A5, Taxiway A6, and Taxiway A7 connectors for the entirety of the phase duration. No construction activities will take place within the restricted RSA or Taxiway Safety Area (TSA) limits.

Construction will occur within in the restricted Runway Object Free Area (ROFA) limits and will comply with the requirements described in Section 18.b of this report and in accordance with FAA AC 150/5370-2G standards.

Construction will occur within the restricted Taxiway Object Free Area (TOFA) limits during Phase 1, 2 and 5A of this project. Section 18.d details the additional restrictions that will be put in place in order to complete the construction activities within the TOFA.

Construction activities are prohibited in the runway safety area, and may be restricted in the taxiway safety area, and taxiway object free area while the associated runway or taxiway is open to aircraft operations. In addition, personnel, material, and/or equipment may not penetrate the obstacle free zone while the runway is open for aircraft operations.

See Section 2 and the phasing plans in Appendix A for limits of these closures.

3.b Mitigation of Effects

Mitigating the effects on the portions of the airfield can be assisted by adhering to the items within this CSPP; compliance with GYR Airport Operations instructions and policies regarding airfield safety and maneuvering about the airfield; and enforcement of the Contractor's Safety Plan Compliance Document (SPCD).

Taxiway and runway operations may be temporarily changed based on the construction phasing of the project. Appropriate notification measures should be taken according to Section 9 of this CSPP.

GYR does not have a dedicated ARFF station; however, emergency vehicles and other airport vehicles should be able to conduct their business using designated haul routes and perimeter service roads as shown in the initial phasing drawings in Appendix A.

The maintenance of essential utilities shall be conducted by the Contractor. Improvements to electrical utilities and storm drain utilities will be incorporated into the project construction as indicated in the initial phasing drawings in Appendix A.

Any temporary changes to air traffic control procedures will need to be coordinated between the tower and GYR Operations through the issuance of NOTAMs as discussed in Section 9 of this CSPP.

All parties involved during the construction process should be aware of coordination protocol as provided in Section 1 of this CSPP; Phasing, closures, and areas affected by this project as provided in Sections 2 and 3 of this CSPP; Rules regarding Contractor site access as provided in Section 5 of this CSPP; and notification procedures and emergency contact information as provided in Section 9 of this CSPP.

4. *PROTECTION OF NAVIGATIONAL AIDS (NAVAIDS)*

No work under this project is anticipated to be in immediate proximity of operational NAVAID critical areas.

5. *CONTRACTOR ACCESS*

5.a *Location of Stockpiled Construction Materials*

The Contractor Staging Area and Stockpile Area are depicted in the initial phasing drawings in Appendix A. Upon project completion, the Contractor shall restore storage and staging areas to pre-project conditions.

Stockpiles shall not exceed a height of 3 feet above adjacent grade.

The Contractor may also request specific equipment and materials to be left within the confines of the work area boundaries provided that:

- The requirements of AC 150/5370-2G Sections 2.9 and 2.22 are met, and;
- Approval is obtained by GYR Airport Operations Staff.

5.b *Vehicle and Pedestrian Operations*

5.b.1. *Construction Site Parking*

The Contractor employee parking area is depicted in the initial phasing drawings in Appendix A. Any additional parking areas required by the Contractor shall be coordinated with GYR Operations Staff prior to beginning any construction activities. Any employee parking area will be located outside the Airport Operations Area (AOA). The parking areas should provide reasonable Contractor employee access to the job site.

5.b.2. *Construction Equipment Parking*

Contractor employees must park and service all construction vehicles in an area designated by the airport operator outside the OFZ and never in the safety area of an active runway or taxiway. Employees should also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT to any taxiways or runways under air traffic control

nor obstruct any runway visual aids, signs, or navigation aids. Parking for construction equipment shall be at the Contractor Staging Area; however, the Contractor shall coordinate the location of construction equipment parking with GYR Operations Staff prior to beginning any construction activities.

5.b.3. Access and Haul Routes

There are multiple haul routes for this project. The haul route utilized will be dependent on the construction phase. Haul routes either begin at Gate 2 on Goodyear Parkway or Gate 3 on Yuma Road. Routes beginning at Gate 2 enter the AOA from the northeast side of the airport via Goodyear Parkway and proceed south along the vehicle service road to the Contractor Staging Area as shown in Appendix A. Routes beginning at Gate 3 enter the AOA from the northeast side of the airport via Yuma Road and proceed either southwest to the work area or west to the Contractor Staging Area as shown in Appendix A. These haul routes and other haul routes are subject to approval by GYR Operations Staff and are subject to change based on airport operational needs. Contractor site access and haul routes are depicted in the initial phasing drawings in Appendix A.

Haul routes to the project area for Phase 1 and Phase 5D begin in different locations depending on the infield being accessed. The haul route to access the AN1 and AN2 infields begin at Gate 3 and go southwest between the runup area and unrestricted RSA where it enters infield AN1. The AN2 infield is accessed by crossing the Taxiway A1 connector. The haul route to access the AN5, AN6, AN7, and AN8 infields begin at the Contractor Staging Area accessed via Gate 2 and go west to cross Taxiway A and enter the project area on the south side of the AN7 infield. Contractors can access the AN8 infield by crossing the Taxiway A7 connector. Contractors can access the AN6 infield by crossing the Taxiway A6 connector and can then access the AN5 infield by continuing north and crossing the Taxiway A5 connector. The haul route to access the AN10 infield begins at the Contractor Staging Area accessed via Gate 2 and turns south to access the vehicle service road, then turns west to cross Taxiway A and enter the project area on the south side of the AN10 infield. Phase 1 and 5D occur during Runway 3-21 closures and no aircraft movements are anticipated in the movement area. The Contractor is required to coordinate with the GYR Operations Staff to follow proper procedure for crossing Taxiway A and the taxiway connectors.

The haul route to the project area for Phase 2 and Phase 5A begin at Gate 3 and go southwest just outside of the western edge of the runup area until it enters the north side of the AN1 infield. The AN2 infield is accessed by crossing the temporarily closed Taxiway A1 connector.

The haul route to the project area for Phase 3 and Phase 5B begin at the Contractor Staging Area accessed via Gate 2 and go west to cross Taxiway A and enter the project area on the south side of the AN7 infield. Contractors can access the AN8 infield by crossing the temporarily closed Taxiway A7 connector. Contractors can access the AN6 infield by crossing the temporarily closed Taxiway A6 connector and can then access the AN5 infield by continuing north and crossing the temporarily closed Taxiway A5

connector. The Contractor is required to coordinate with the GYR Operations Staff to follow proper procedure for crossing Taxiway A and the taxiway connectors.

The haul route to the project area for Phase 4 and 5C begins at the Contractor Staging Area accessed via Gate 2 and turns south to access the vehicle service road, then turns west to cross Taxiway A and enter the project area on the south side of the AN10 infield.

All existing airfield pavement (runways, taxiways) to be used by contractor shall be plated and all pavements, including service roads, shall be restored to pre-construction condition at no additional cost to the City.

The Contractor shall include any additional routes required for specific construction activities (i.e. paving activities) to GYR Operations Staff for evaluation and approval as part of the SPCD before beginning construction activities.

All access into movement areas will be coordinated by the Contractor with escort provided by Airport Operations, as indicated in AC 150/5370-2G.

In all cases the Contractor shall adhere to the following requirements:

- Haul routes shall include provisions to prevent inadvertent entry to movement areas.
- Fire Fighting, Police, and Airport Operations equipment and personnel shall not be impeded at any time.
- Haul route activity shall not interfere with NAVAIDs or approach surfaces of operational taxiways or runways.
- The Contractor shall protect the haul routes from damage. Any damage occurring shall be repaired by the contractor at no cost to the City of Phoenix.
- The contractor shall maintain a dedicated full-time power-vacuum on the haul route at all times. Two manned power-vacuums shall be required when Bituminous Pavement is being hauled.
- Workers must remain in the work areas during work hours. If more than one work area is active at the same time, there shall be no movement between areas unless they are adjacent, and Airport Operations has given prior approval. Only personnel will be allowed to enter and leave the work areas in vehicles with proper warning lights/flagging per FAA and GYR requirements.

The Contractor is cautioned that portions of the haul route are adjacent to active taxiways within active aprons that will include propeller and jet aircraft. The Contractor shall assume responsibility for any damage caused by Foreign Object Debris (FOD) created by their operations.

5.b.4. Contractor Vehicles

All Contractor vehicles operating within the Airport Operations Area (AOA) shall adhere to the following:

- Insurance coverage per the Project Documents.
- The Company name and/or logo on each side of the vehicle (no paper signs).
- During day light hours, vehicles must be provided with a 3-foot by 3-foot square flag with a checkered pattern of international orange and white squares at least 1-foot on each side; or a yellow flashing light that is mounted on the uppermost part of the vehicle. The light must be visible from any direction, day and night, including from the air.
- During nighttime hours from dusk to dawn, and during periods of limited visibility, all vehicles shall be equipped with a flashing yellow light.
- All vehicles entering the work area may be searched by the owner on a random basis. The Contractor shall allow additional time to accommodate searches.

5.b.5. Vehicle Operator Requirements and Training

Any individual with unescorted access and required to operate a vehicle in the restricted areas of the airport, but exclusive of the airport movement areas must have an Airfield Driver's Permit (ADP) icon affixed on their airport issued SIDA identification media. To obtain the ADP icon, the individual will be required to:

1. Read the "Airfield Driver Permit Study Guide" prior to taking the test. (Material obtained at the Security Badging Office)
2. Possess a valid unexpired state issued driver's license
3. Successfully pass the ADP test administered by the Security Badging Office.

Individuals who do not pass the test will be instructed to review the study guide and will then be allowed to test again on another day.

The City of Phoenix Aviation Department Operations Division will provide training for all individuals requiring an ADP. This training is provided through a self-paced interactive computer program. Information presented in the Airfield Driver Permit Study Guide or other media (e.g. videos) is tested through a series of multiple choice and true/false questions.

5.b.6. Situational Awareness

Vehicle drivers must confirm by personal observation that aircraft is approaching their position (either in the air or on the ground) when given clearance to cross runway,

taxiway, or any other area open to airport operations. In addition, it is the responsibility of escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

5.c Two-Way Radio Communication

The Contractor will not be allowed to communicate by radio on GYR or FAA frequencies. All communication will be directly with the Construction Manager or Airport Operations Staff. The Contractor shall not utilize any equipment that interferes with GYR or FAA radio frequencies.

5.d Airport Security

The Contractor shall, at a minimum, have his/her Superintendent and Foreman obtain site specific training and direction from GYR Operations Staff for driving within the AOA. This training shall be relayed to each worker as part of the daily Contractor Safety Meeting. The Contractor shall maintain a full-time gate guard on any access gate controlled by the Contractor. Gate security shall be maintained as indicated in AC 150/5370-2G Section 2.9. Access gates shall be locked when not manned by a gate guard.

5.d.1. Work Area

The work areas shall be as indicated in the Project Layout Plan in **Appendix A** of this CSPP. The Contractor shall adhere to the requirements on these sheets and as follows:

- The Work Area is that area under construction, flagged, barricaded, closed to aircraft and separated from other areas of active aircraft movements. Work Area boundaries shall be as shown on the drawings and shall be suitably marked by the Contractor with a barricade line spaced according to Section 16.b.1 of this CSPP. At a minimum, each barricade shall have one steady burn red light attached. Each barricade shall be anchored and/or filled satisfactorily to prevent overturning and movement from wind or jet blast.
- In locations where it is deemed that additional protection is required to protect ground personnel and vehicles from construction activities, concrete barriers with solid burn red lights may also delineate construction activities.
- The type of construction delineators and other barriers to be used shall be submitted for advanced approval by the Construction Manager and shall remain the property of the Contractor at the completion of construction.
- The Contractor shall have sanitary facilities, adequate water supply, tools, equipment, and supplies to support work needs and requirements when in the work zones. Inadequate preparation will not be allowed as a basis for extra or additional time.

- The Contractor shall take all necessary items to control the work zone, all cleanup equipment necessary to clean the work zone, and return all equipment supplies and incidentals to the staging areas at the end of shifts unless otherwise allowed by GYR Operations Staff whereby an additional work shift is replacing the current shift. No equipment, materials, or incidentals may be left in the work zone at any time without personnel working in the work zone.
- The Contractor shall be equipped with the necessary communication equipment to control the work zone activities and to communicate with GYR Operation Staff.

6. WILDLIFE MANAGEMENT

6.a Trash

The Contractor shall carefully control and continuously remove waste or loose material that might attract wildlife or otherwise become foreign object debris (FOD).

6.b Standing Water

The Contractor shall not allow water to pool or otherwise remain standing that might attract wildlife.

6.c Tall Grass and Seeds

Not applicable to this project.

6.d Poorly Maintained Fencing and Gates

The Contractor shall maintain all fencing and gates under their control to prevent wildlife from gaining access to the AOA.

6.e Disruption of Existing Wildlife Habitat

Not applicable to this project.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

Waste and loose materials, referred to as FOD, can cause damage to aircraft landing gear, propellers, and jet engines. The contractor shall not leave or place FOD on or near active aircraft movement areas. Materials tracked onto those areas must be continuously removed during the project. Additionally, smaller items such as paper, plastics, cans, bottles, and the like shall never be allowed to be deposited anywhere in the airfield perimeter. The Contractor shall immediately remove or secure waste and loose materials from the work site and haul routes.

The Contractor shall maintain full time vacuum equipment in accordance with the project specifications.

8. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT

All construction activities with the potential to generate or require the use of hazardous materials shall be performed in accordance with all local, state, and

federal regulatory requirements. All project personnel shall be trained to recognize hazardous wastes on the project and to respond appropriately to ensure safety and protect the environment. In the event of a hazardous material spill, the procedures provided in the emergency response section pertaining to notification and response responsibilities shall apply.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

9.a List of Responsible Representatives

The Contractor shall provide the phone numbers for five (5) of its responsible personnel, including the project superintendent and, the responsible personnel from each of the key subcontractor firms, each of whom may be contacted in case of an emergency. Personnel shall be on-call 24 hours per day for maintaining construction hazard lighting and barricades. The Contractor will designate a person responsible to maintain and service all traffic control equipment. This contact list must be determined once the job has been bid and a Contractor has been selected. This list will be provided by the Contractor for distribution at the preconstruction meeting.

City of Phoenix Project Manager Contact Information

Kurt Krause

Design & Construction Services Division City of Phoenix – Aviation Department

Mobile: (480) 313-0244

Office: (602) 681-3612

Email: kurt.krause@phoenix.gov

9.b NOTAMs

NOTAM issuance will occur when construction activity areas are adjacent to or directly impact aircraft operations. Airport Operations personnel shall issue all NOTAM's. It is incumbent on the Contractor to notify Airport Operations, through the Construction Manager, of any activities that may require a NOTAM a minimum of 72 hours in advance of starting such activities.

9.c Emergency Notification Procedures

For all emergencies involving life safety (injuries, fires, security breaches, etc.) the Contractor will immediately call 911, the GYR Emergency number as soon as possible by contacting the Airport's Emergency number. The typical "911" call will connect to the emergency dispatcher outside of the airport and will have to be re-routed to this number. Please remind all your project team members of this procedure.

EMERGENCY TELEPHONE NUMBER – 911
NON-EMERGENCY TELEPHONE NUMBER
623-932-4550
FOR
POLICE FIRE RESCUE

9.d Coordination with ARFF Personnel

There is no Aircraft Rescue and Fire Fighting (ARFF) at GYR. All communications relating to typical ARFF operations will be made through Airport Operations Staff.

9.e Notification to the FAA

FAA Form 7460-1 will be necessary for this project. It will be filed by the City of Phoenix prior to construction. It is incumbent on the Contractor to notify the City of Phoenix, through the Construction Manager, of any additional activity that may require an additional Form 7460-1 a minimum of seven (7) calendar days in advance of starting such activities.

10. INSPECTION REQUIREMENTS

10.a Daily (Or More Frequent) Inspections

Airport Operations personnel along with the Construction Manager will conduct inspections of the work area at least twice daily to ensure that the Contractor is complying with the safety plan and that altered construction activities do not create potential safety hazards

10.b Final Inspections

Airport Operations personnel along with the Construction Manager will conduct an inspection at the completion of each area of work and project and prior to opening to traffic to ensure no safety hazards exist. Construction activity will be stopped should interference to existing utilities be caused by the Contractor activities. In case of emergency, when the Contractor's personnel believe they may be in an area of existing utilities, the Construction Manager shall be notified immediately.

11. UNDERGROUND UTILITIES

The safety plan must provide procedures for notifying the City of Phoenix if construction requires shutting off or otherwise disrupting any water line or fire hydrant on the airport or adjoining areas, or if required, the blocking and/or rerouting of emergency access drive lanes or building entrances/exits. This notification shall be provided with as much advance notice as possible (48 hours at a minimum) and shall be coordinated through the Construction Manager, then directly to Airport Operations. Airport Operations will then be responsible to make the appropriate notifications.

Any trenches or excavations must be in compliance with the safety standards and guidelines set forth in AC 150/5370-2G Chapter 3. Airport Operations will have final authority for inspection and approval of all trenches, excavations, and cover requirements.

12. PENALTIES

Penalties for non-compliance offenses vary on the severity and can result in the removal of the violator from the airport. The table below lists the Safety and Security Non-Conformance Contract Adjustment (deduction) schedule as used at Phoenix Goodyear Airport.

Runway Incursion	\$15,000.00
Active Taxiway Incursion	\$10,000.00
Runway/Taxiway Safety Area	\$1,000.00
Security or Badging/Licensing Non-Compliance	
First Offense	\$1,000.00
Second Offense	\$5,000.00
Each Additional Offense	\$15,000.00
Aviation Department has the option to issue warnings on first offense, <i>if</i> the incident is justified.	
Individuals involved in a non-compliance violation may be required to surrender their security badge and airfield driver's license pending investigation of the matter.	

13. SPECIAL CONDITIONS

Airport emergencies and closures (i.e. presidential visits) take precedent over all other activities. If an emergency or closure occurs on Airport property that requires evacuation, stoppage of work, or clearing of work area and returning that area to service, the contractor(s) shall follow the directions of Airport Operations, City of Goodyear Fire, or City of Goodyear Police to ensure safety and protection of all affected by the emergency.

The Contractor shall be aware that tall equipment (i.e. concrete pumps and cranes) will require a Form 7460-1 issued for specific equipment. The Form will be submitted to the FAA as indicated in Section 9 of this document. Tall equipment shall have checkered flags and or flashing lights attached at the top of the boom.

14. RUNWAY AND TAXIWAY VISUAL AIDS

The CSPP must ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs, and visual NAVAIDs remain in place and operational. The CSPP must address the following, as appropriate:

14.a General

Airport markings, lighting, signs and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of material that would minimize damage to an aircraft in the event of inadvertent contact. Markings, lighting, signs and visual NAVAIDs are frangible structures as required by the Advisory Circulars.

14.b Markings

There will be low profile and vertical panel barricades that will be used to delineate the construction site. The barricades shall be checked daily to be sure they are properly positioned and that the lights are functioning properly.

This project will require the closure of the Taxiway A1, Taxiway A5, Taxiway A6, and Taxiway A7 connectors for construction activities in the AN1, AN2, AN5, AN6, AN7, and AN8 infields. Barricades will be placed outside the intersections Taxiway A's safety area. An "X" will be placed at the entrance to the closed taxiway from the runway in accordance with AC 150/5340-1M, Change 1. Phase 1 will require the closure of the Taxiway A1, Taxiway A5, Taxiway A6, and Taxiway A7 connectors for the duration of work activities in the project area. These connectors may be open during the 30-day waiting period following the application of herbicide. The Taxiway A1 connector will remain closed for the entire duration of Phase 2 and Phase 5A. At the end of Phase 1, at the end of Phase 2, and at the end of Phase 5A, the Taxiway A1 connector will be restored to full operation and all equipment used for the closure shall be removed including the barricades and barricade lighting, light covers, and temporary "X". The Taxiway A5, Taxiway A6, and Taxiway A7 connectors will remain closed for the entire duration of Phase 3 and Phase 5B. At the end of Phase 3, and at the end of Phase 5B, the Taxiway A5, Taxiway A6, and Taxiway A7 connectors will be restored to full operation and all equipment used for the closure shall be removed including the barricades and barricade lighting, light covers, and temporary "X"s.

14.c Lighting and Visual NAVAIDs

Placement of construction area lighting for nighttime construction must be coordinated with Airport Operations to ensure no adverse impacts to ATCT or pilot visibility. All Temporary Airfield lighting must be approved by Airport Operations Staff. Airport Operations Staff will be responsible for ensuring that any temporary lighting is compliant with AC 150/5340-30J, AC 150/5345-50B, and AC 150/5345-53D.

This project will require the closure of the Taxiway A1 connector for construction activities in the AN1 and AN2 infields. It is not practical to deactivate the taxiway lighting circuit; therefore, light fixtures for the Taxiway A1 connector will be covered in a way as to prevent light leakage.

This project will require the closure of the Taxiway A5, Taxiway A6, and Taxiway A7 connectors for construction activities in the AN5, AN6, AN7, and AN8 infields. It is not practical to deactivate the taxiway lighting circuit; therefore, light fixtures for the Taxiway A5, Taxiway A6, and Taxiway A7 connectors will be covered in a way as to prevent light leakage.

14.d Signs

There will be closed taxiways during construction that will require the existing runway and taxiway signs, which will not be removed, to be covered to prevent misdirecting pilots. These sign coverings shall be secured to prevent the material from blowing away during normal airport operations and/or weather events.

All plans for temporary airfield signage must be approved by Airport Operations, and any temporary signage must comply with AC 150/5345-44K, AC 150/5340-18G, AC 150/5345-53D, and Engineering Brief 93. Airport Operations will be responsible for forwarding the airport's approved sign plan to the FAA for approval. Details regarding any temporary airfield signage or lighting needed for this project must be included in Appendix A of this CSPP.

15. MARKING AND SIGNS FOR ACCESS ROUTES

Pavement markings and signs for construction personnel shall conform to AC 150/5340-18G and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23A, Frangible Connections, which may require modification to size and height guidance in the MUTCD.

16. HAZARD MARKING, LIGHTING AND SIGNING

The Contractor shall adhere to the requirements of AC 150/5370-2G Section 2.20. Low level barricades equipped with solid red lights must be placed to properly delineate the work areas from the remainder of the airport.

16.a Purpose

Hazard marking, lighting, and signing prevents pilots from entering areas closed to aircraft and construction personnel from entering areas open to aircraft, and they serve as comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting shall also be used to identify open manholes, open trenches, small areas under repair, stockpiled materials, waste locations and any other potentially hazardous site during construction. Other construction-related hazards may include disruption to the instrument landing

system (ILS) and underground power lines along with construction activity adjacent to various safety areas. These hazards will be identified and marked in accordance with AC 150/5370-2G to ensure contractor personnel interact with these hazards appropriately.

16.b Equipment

16.b.1. Barricades

Low profile barricades with the MUTCD standard reflective orange and white marking with flashing red lights mounted on the ends of the barricade and vertical panel barricades with the MUTCD standard reflective orange and white marking with flashing red light mounted on the top of the barricade will be used to delineate the construction site. See Appendix B for sample barricades for use on this project. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. The barricades shall be spaced no more than 40 feet apart where shown on the safety plan in order to prevent aircraft breaches into the work area. The barricades shall be weighed against prop wash and capable of withstanding up to 100 MPH wind forces. The Contractor shall identify the person responsible for the maintenance and the marking and lighting in Section 9. Provision must be made for ARFF access if necessary.

16.b.2. Lights

Flashing red caution lights shall be battery or solar operated and shall maintain such intensity so as to be readily identified from distances of at least 200 feet during darkness in accordance with the 2009 edition of the Manual on Uniform Traffic Control Devices (MUTCD) and the 2021 Arizona Department of Transportation (ADOT) Standard Specifications for Road and Bridge Construction.

16.b.3. AOA – General

Barricades are not permitted in an active safety area. Within a runway or taxiway object free area, and on aprons, use barricades as noted above to separate all construction areas from the movement area. The proper barricade type shall be used when delineating construction activities. All barricades, temporary markers, and other objects left in areas adjacent to any open runway or taxiway/taxilane safety area or apron must be as low as possible to the ground and no more than 18 inches high, exclusive of supplementary lights and flags. Barricade placement shall be in accordance with AC 150/5370-2G, this CSPP, and the initial phasing drawings included in Appendix A of this CSPP.

16.b.4. Maintenance

The Contractor shall be responsible for the maintenance and the markings, lighting and barricades and is required to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The Contractor shall file the contact person's information with GYR Operations Staff that checks for proper operation at least once per day, in accordance to Section 9 of this CSPP.

17. *WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION*

This project includes night-time construction activities for the majority of the project duration and lighting equipment will be required to adequately illuminate the work area. All support equipment, except haul trucks, are recommended to be equipped with artificial illumination to safely illuminate the area immediately surrounding their work areas. Light towers will be positioned to aim away from the ATCT cabs and the active Runway 3-21 and will be removed from the work area following the end of each shift. Standards and recommendations for the lighting of support equipment and the use of light towers will be in accordance with AC 150/5370-2G.

18. *PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS*

The Contractor shall adhere to the requirements of AC 150/5370-2G Section 2.22. Runway and Taxiway Safety Areas shall be preserved to all extents practical. Open trenches, equipment storage, and stockpiles within any of these safety areas will not be permitted unless the pavement is closed to aircraft. Coordination with GYR Operations Staff is necessary to properly delineate the closed, active and restricted portions of the Runway and Taxiway Safety Areas.

18.a *Runway Safety Area (RSA)*

Access into movement area or Safety Areas without an Airport Operations escort is prohibited. The Contractor shall ensure that no personnel or equipment enters into the active movement areas or their associated Safety Areas without appropriate Airport Operations escort. All access into movement areas must be coordinated and approved by the on-duty Airside Operations Supervisor. All communications with the Air Traffic Control Tower (GYR ATCT) will be the responsibility of Airport Operations.

1. No Construction within the RSA.

No construction may take place within the Runway Safety Area of an open Runway. During construction activities, Runway 3-21 will either be closed or be restricted to RDC B-I aircraft which will decrease the RSA width from 500 feet to 120 feet and will not conflict with any portion of the work area.

2. Airport Operator Coordination.

Runway Safety Area dimension adjustments are the responsibility of the airport operator, ATCT and the proper FAA representative. A NOTAM must be issued in accordance with Section 9 of this CSPP as part of the RSA adjustment process. This project will require Runway 3-21's RSA to be adjusted from a width of 500 feet to 120 feet which will restrict the runway to RDC B-I aircraft during construction activities.

3. Blasting.

Excavation via blasting is not permitted for this project.

4. Excavations.

- a) No open trenches are permitted in the safety areas while the runway is open. In the event that excavations are located within the RSA and cannot be backfilled before the associated runway is to be opened to its full unrestricted operation, the Contractor shall immediately place a cover to allow for the safe operation of the heaviest aircraft operating on the runway without damage to the aircraft.
- b) Marking and lighting methods shall be used to delineate excavations in the construction areas in accordance with AC 150/5370-2G. Contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by Airport Operations Staff and light them with red lights during hours of restricted visibility or darkness. The closure of taxiways will require that Section 9 and Section 14 be referenced for proper methods of NOTAMs issuance and visual aids to delineate the construction area. Coordination with the FAA will be discussed to determine the appropriate airspace evaluation requirements.

5. Erosion Control.

The Contractor is responsible for maintaining the RSA standards for soil erosion including ensuring that the RSA is cleared and graded and has no potentially hazardous ruts, humps, depressions, or other surface variations. They will also be responsible for ensuring that, at the end of each shift, the unrestricted RSA is capable of supporting all vehicles and equipment that may traverse these areas along with supporting the occasional passage of aircraft without causing structural damage to the aircraft. Silt screens shall be placed inside the grates of airfield catch basins in order to prevent construction debris from infiltrating the storm drain network.

18.b Runway Object Free Area (ROFA)

Construction may be permitted in the ROFA provided that all equipment be removed from the ROFA when not in use, and materials will not be stockpiled in the ROFA. All project phases have construction in the ROFA. Normal operations shall not be affected to complete construction within the ROFA.

18.c Taxiway Safety Area (TSA)

The Contractor shall ensure that no personnel or equipment enters into the active movement areas or their associated Safety Areas without appropriate Airport Operations escort. Access into movement area or Safety Areas without an Airport Operations escort is prohibited. All access into movement areas must be coordinated and approved by the on-duty Airside Operations Supervisor. All communications with the Air Traffic Control Tower (GYR ATCT) will be the responsibility of Airport Operations.

1. No Construction within the TSA.

Typically no construction will take place within the Taxiway Safety Area of an open taxiway. In rare circumstances where the section of taxiway is indispensable for aircraft movement, open trenches or excavations may be permitted in the TSA while the taxiway is open to aircraft operations, subject to the restrictions outlined in Section 2.22.3.4.2 of FAA Advisory Circular 150/5370-2G. Portions of the Taxiway network are anticipated to be closed throughout the project. Phasing and construction limits have been established so that much of the work is outside any open, active taxiway safety areas. Connector taxiways will be closed at different times to enable construction and to prevent aircraft from entering any active TSA.

2. Airport Operator Coordination.

Taxiway Safety Area dimension adjustments are the responsibility of the airport operator, ATCT and the proper FAA representative. A NOTAM must be issued in accordance with Section 9 of this CSPP as part of the TSA adjustment process. This project will require all airfield taxiways and taxiway connectors' Safety Areas to be adjusted from a width of 171 feet to 49 feet which will restrict the taxiways to ADG I aircraft operations during construction activities.

3. Blasting.

Excavation via blasting is not permitted for this project.

4. Excavations.

- a) No open trenches are permitted in the safety areas while the taxiway is open. In the event that excavations are located within the TSA and cannot be backfilled before the associated taxiway is open to unrestricted operations, the Contractor shall immediately place a cover to allow for the safe operation of the heaviest aircraft operating on the taxiway without damage to the aircraft.
- b) Marking and lighting methods shall be used to delineate excavations in the construction areas. The closure of both runways and various taxiways will require that Section 9 and Section 14 be referenced for proper methods of NOTAMs issuance and visual aids to delineate the construction area. Coordination with the FAA will be discussed to determine the appropriate airspace evaluation requirements.

5. Erosion Control.

The Contractor is responsible for maintaining the TSA standards for soil erosion including ensuring that the TSA is cleared and graded and has no potentially hazardous ruts, humps, depressions, or other surface variations. They will also be responsible for ensuring that, at the end of each shift, the unrestricted TSA is capable of supporting all vehicles and equipment that may traverse these areas along with supporting the occasional passage of aircraft without causing structural damage to the aircraft. Silt screens shall be placed inside the grates of airfield

catch basins in order to prevent construction debris from infiltrating the storm drain network.

18.d Taxiway Object Free Area (TOFA)

No construction may occur within the taxiway object free area while the taxiway is open for aircraft operations except as provided in Section 2.22.4 of FAA Advisory Circular 150/5370-2G. A portion of the construction activities in the AN2 infield will occur in Taxiway A's TOFA which is permitted subject to the following conditions:

- Taxiing speed is limited to 10 MPH.
- NOTAMs issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway.
- Marking and lighting meeting the provisions of AC 150/5370-2G and as described in Section 14 and Section 16 of this CSPP.
- Appropriate orange construction signs installed at the request of Airport Operations in accordance with AC 150/5370-2G and as described in Section 14.d of this CSPP.
- Five-foot clearance is maintained between equipment/materials and any part of an aircraft, including wingtip overhang. It will be necessary to move personnel and equipment for the passage an aircraft that cannot maintain such clearance.
- Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft or airport personnel. Flaggers will also be used to direct taxiing aircraft.

Taxiways associated with this project have a restricted TOFA width of 89 feet. It is anticipated that a small portion of the construction activities to take place in the AN2 infield will need to occur within an active TOFA. Before this work takes place, the contractor shall notify the appointed GYR Operations Staff so that a NOTAM can be issued as described in Section 9.b of this CSPP. Refer to Section 5 on proper vehicle and personnel movement within safety areas. Any stockpiling of materials shall refer to Section 5.a for information on stockpiling of materials.

18.e Obstacle Free Zone (OFZ)

In general, personnel, material and equipment may not penetrate the OFZ while the runway is open for aircraft operations. The Runway Obstacle Free Zone (ROFZ) has a width of 400 feet but is reduced to 250 feet when Runway 3-21 is restricted to RDC B-I aircraft during construction activities. The majority of the construction activities will occur in areas outside of the restricted OFZ. A portion of the work will occur within the limits of the restricted OFZ. In these instances, Runway 3-21 will be closed. The

timing and duration of closures is shown on the Phasing Plans in Appendix A. The City of Phoenix Aviation Department and GYR Operations shall coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

18.f Runway Approach/Departure Surfaces

The Contractor shall take precautions to protect the runway approach/departure areas and clearway areas during construction and be sure that equipment is removed from the areas when not in use. No construction will take place within the Runway Protection Zone of an open runway. The project phasing and construction limits have been established so that all work is outside any open, active RPZs. No Construction activities are anticipated to occur in these areas.

19. OTHER LIMITATIONS ON CONSTRUCTION

19.a Prohibitions

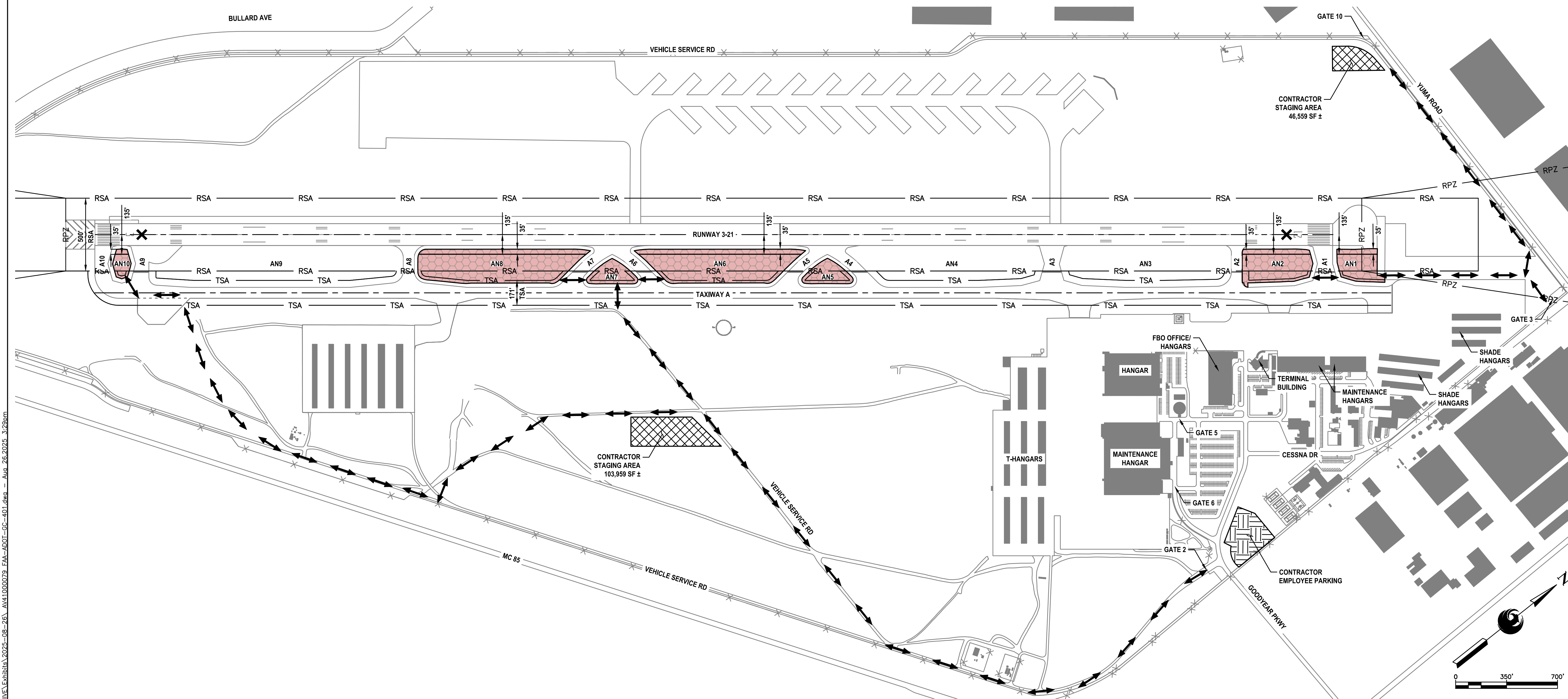
Construction activities shall not interfere with any NAVAIDS, safety areas, obstacle-free zones, object free areas, approach and departure surfaces, and any threshold citing criteria. This includes limitations on equipment height and stockpiled material.

Contractors shall not use open flame welding or torches unless adequate fire safety precautions are provided, and the Construction Manager has approved their use. Under no circumstances should flare pots be used within the AOA at any time. The use of electrical blasting caps is not permitted on, or within 1,000 feet of, the airport property (see AC 150/5370-10, Standards for Specifying Construction on Airports).

19.b Restrictions

Work within the ROFZ, RSA, and RPZ may only be completed during nighttime closures of Runway 3-21. It is anticipated that a full runway closure will be required for Phase 1 and Phase 5D. The majority of the construction activities will occur during nighttime shifts, with the exception of paving operations which will occur during the daytime, when Runway 3-21 is restricted to RDC B-I aircraft, and the taxiways are restricted to ADG I aircraft. The Taxiway A1 connector will be closed for the entirety of Phase 1, Phase 2, and Phase 5A. The Taxiway A1 connector closure will be restored to full operation at the end of Phase 1, Phase 2, and Phase 5A. The Taxiway A5, Taxiway A6, and Taxiway A7 connectors will be closed for the entirety of Phase 1, Phase 3, and Phase 5B. The Taxiway A5, Taxiway A6, and Taxiway A7 connector closures will be restored to full operation at the end of Phase 1, Phase 3, and Phase 5B. All restrictions on aircraft will be restored to full operation at the end of each shift. Specific construction timing constraints must be discussed and approved with airport operations a minimum of 48 hours in advance of construction activities. Specific items of work may be time limited for construction operations that are potentially disruptive to specific airport activity. Note that the airport is not closed during this period, but airport activity is reduced to the extent certain elements of work can be accomplished without impacting airport operations.

APPENDIX A
PHASING PLANS



- NOTES:
1. AREAS SHOWN ARE INTENDED TO BE AN APPROXIMATE GEOGRAPHICAL REPRESENTATION.
 2. THE CONTRACTOR SHALL COORDINATE THE LIMITS OF THE STAGING AND STORAGE AREA, THE LIMITS OF THE EMPLOYEE PARKING AND TEMPORARY FENCING WITH AIRPORT OPERATIONS PRIOR TO CONSTRUCTION.
 3. CONTRACTOR CAN ACCESS THE SITE USING GATE 2 AND 3. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM AIRPORT OPERATIONS REGARDING USE OF ANY GATE. AIRPORT OPERATIONS MAY ALLOW ACCESS FROM OTHER GATES, BASED ON AVAILABILITY OF SECURITY STAFF.
 4. CONTRACTOR TO ENSURE THAT NO CONSTRUCTION TRAFFIC ENTERING SITE BACKS UP ON OR BLOCKS ANY PUBLIC STREET.
 5. ANY EXISTING PAVEMENT AREA ALONG ANY HAUL ROUTE SHALL BE ADEQUATELY PROTECTED PER CIVIL TECHNICAL SPECIFICATION ITEM 34 PRIOR TO ANY HAULING ACTIVITIES.

LEGEND

	CONTRACTOR HAUL ROUTE
	RUNWAY CLOSURE MARKER
	RUNWAY PROTECTION ZONE
	RUNWAY SAFETY AREA
	TAXIWAY SAFETY AREA
	CONTRACTOR STAGING
	EMPLOYEE PARKING AREA

PHASE 1 ELEMENTS:
PHASE 1 ACTIVITIES GENERALLY CONSIST OF PAVEMENT SAWCUT, EXISTING ASPHALT REMOVAL, APPLICATION OF HERBICIDE, GRADING, EARTHWORK, AND SUBGRADE COMPACTION WITHIN THE 35' DIMENSION FROM THE RUNWAY SHOULDER EDGE. ALL WORK THROUGH SUBGRADE COMPACTION SHALL BE COMPLETED WITHIN THE AREAS INDICATED WITH RUNWAY 3-21 CLOSED. THE CLOSURE SHALL BE COORDINATED BETWEEN THE CONTRACTOR AND GYR AIRPORT OPERATIONS STAFF.

AREAS CLOSED TO AIRCRAFT OPERATIONS:
RUNWAY 3-21 CLOSED.

DURATION OF CLOSURES:

DURATION OF CLOSURES:
RUNWAY CLOSURES EXPECTED FOR THE ENTIRE PHASE DURATION OF A MAXIMUM OF 5 CALENDAR DAYS. CLOSURES SHALL BE LIFTED WHEN NO WORK IS BEING COMPLETED DURING THE WAITING PERIOD FOR HERBICIDE.

TAXI ROUTES OF REDUCED TSA AND TOFA TO REFLECT REDUCED ADG USE:

AIRCRAFT SHOULD NOT BE OPERATING WITHIN THE MOVEMENT AREA. CONTRACTOR SHALL COORDINATE WITH GYR OPERATIONS STAFF FOR ANY AIRCRAFT TAXIING MOVEMENTS.

ARFF ACCESS ROUTES:

CONSTRUCTION STAGING, DISPOSAL, AND CLEANOUT AREAS:
CONTRACTOR STAGING, DISPOSAL, AND CLEANOUT AREAS ARE IDENTIFIED ON THIS PLAN SHEET AND CONSIST OF THE APPROXIMATE AREA AS SHOWN.

IMPACTS TO NAVAIDS:

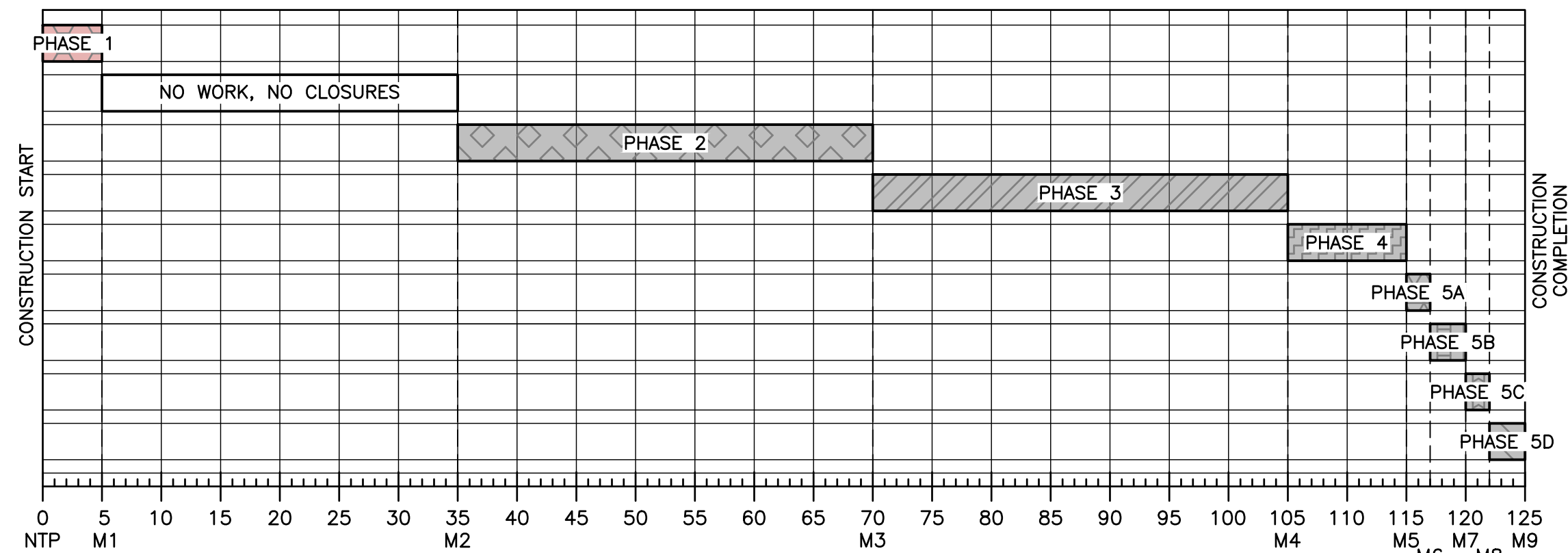
LIGHTING, MARKING, AND SIGNING CHANGES:

AVAILABLE RUNWAY LENGTH AND/OR REDUCED BSA AND ROFA TO REFLECT REDUCED

REQUIRED HAZARD MARKING, LIGHTING, AND SIGNING:
LIGHTED "X" TO BE PLACED AT EACH END OF RUNWAY 3-21 THROUGHOUT DURATION OF PHASE 1.

WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION:

LEAD TIMES REQUIRED FOR NOTIFICATIONS:
THE CONTRACTOR IS REQUIRED TO NOTIFY AIRPORT OPERATIONS A MINIMUM OF 72 HOURS IN ADVANCE TO PROVIDE REQUIRED NOTIFICATIONS.



LEGEND

	PHASE 1 – MAXIMUM 5 CALENDAR DAYS		PHASE 5A – MAXIMUM 2 CALENDAR DAYS
	PHASE 2 – MAXIMUM 35 CALENDAR DAYS		PHASE 5B – MAXIMUM 3 CALENDAR DAYS
	PHASE 3 – MAXIMUM 35 CALENDAR DAYS		PHASE 5C – MAXIMUM 2 CALENDAR DAYS
	PHASE 4 – MAXIMUM 10 CALENDAR DAYS		PHASE 5D – MAXIMUM 3 CALENDAR DAYS
			NO WORK, NO CLOSURES



Designed by: G. SHAW

Drawn by: A. SANTIL

Checked by: C. JHAVE

Date: 08/29/2

Dwg scale: 1"=350'

CONSTRUCTION PHASING PLAN PHASE 1

SHEET
REFERENCE
NUMBER:

EXHIBIT

SHEET 02 OF 10

PRIME CONSULTANT	"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-20 THESE PLANS ARE FOR OFFICIAL USE ONLY"

SECTION 2-28, THESE PLANS ARE FOR OFFICIAL
USE ONLY AND MAY NOT BE SHARED WITH
OTHERS.

EXHIBIT

[illegible]

NO	REVISIONS / SUBMISSIONS	DATE

ADOT GRANT NO.: E3S2I 01C & E4SSM 01C

MAXI GEAR

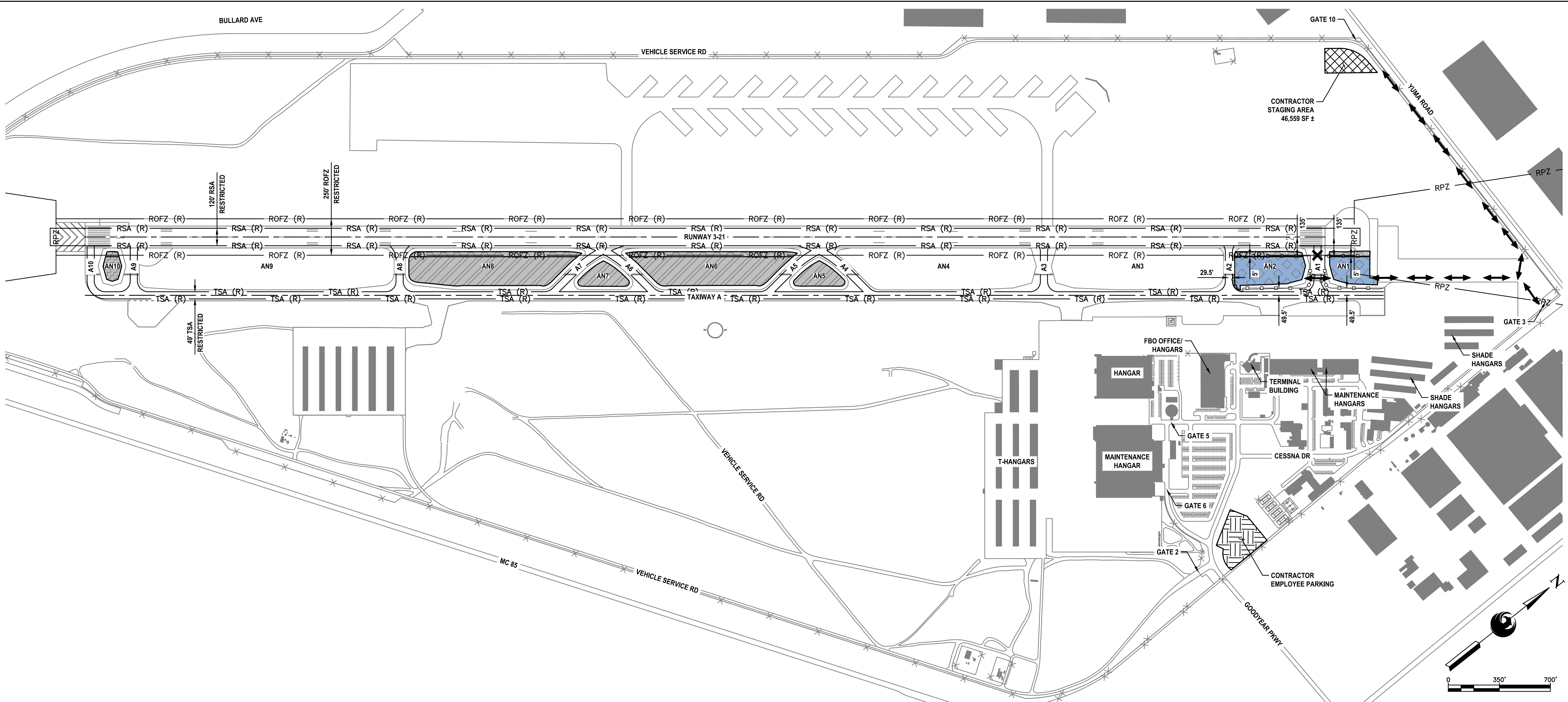
CITY OF PHOENIX AVIATION DEPARTMENT

GOODYEAR AIRPORT

INFIELD PAVING PHASE II

PHASE II
AV 41000070 A DOT

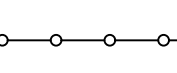
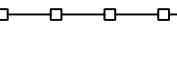
AV 41000079 ADO1
DOT GRANT NO : E3S2I 01C & E4SSM 010



- NOTES:

1. AREAS SHOWN ARE INTENDED TO BE AN APPROXIMATE GEOGRAPHICAL REPRESENTATION.
2. THE CONTRACTOR SHALL COORDINATE THE LIMITS OF THE STAGING AND STORAGE AREA, THE LIMITS OF THE EMPLOYEE PARKING AND TEMPORARY FENCING WITH AIRPORT OPERATIONS PRIOR TO CONSTRUCTION.
3. CONTRACTOR CAN ACCESS THE SITE USING GATE 3. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM AIRPORT OPERATIONS REGARDING USE OF ANY GATE. AIRPORT OPERATIONS MAY ALLOW ACCESS FROM OTHER GATES, BASED ON AVAILABILITY OF SECURITY STAFF.
4. CONTRACTOR TO ENSURE THAT NO CONSTRUCTION TRAFFIC ENTERING SITE BACKS UP ON OR BLOCKS ANY PUBLIC STREET.
5. ANY EXISTING PAVEMENT AREA ALONG ANY HAUL ROUTE SHALL BE ADEQUATELY PROTECTED PER CIVIL TECHNICAL SPECIFICATION ITEM 34 PRIOR TO ANY HAULING ACTIVITIES.

LEGEND

	CONTRACTOR HAUL ROUTE
	TAXIWAY CLOSURE MARKER
— RPZ —	RUNWAY PROTECTION ZONE
— RSA (R) —	RESTRICTED RUNWAY SAFETY AREA
— TSA (R) —	RESTRICTED TAXIWAY SAFETY AREA
— ROFZ (R) —	RESTRICTED RUNWAY OBSTACLE FREE ZONE
	LOW LEVEL BARRICADES (40' SPACING)
	VERTICAL PANEL BARRICADES (40' SPACING)
	CONTRACTOR STAGING AREA
	EMPLOYEE PARKING AREA

PHASE 2 ELEMENTS:
PHASE 2 ACTIVITIES GENERALLY CONSIST OF PAVEMENT SAWCUT, GRADING AND EARTHWORK,
EXCAVATION FOR AND INSTALLATION OF PIPE AND STORM DRAIN STRUCTURES, SUBGRADE COMPACTION.

AREAS CLOSED TO AIRCRAFT OPERATIONS:
 RUNWAY 3-21 RESTRICTED TO RDC B-I AIRCRAFT.
 ALL TAXIWAYS RESTRICTED TO ADG I (49-FT) AIRCRAFT.
 TAXIWAY A1 CLOSED.

DURATION OF CLOSURES:
RUNWAY AND TAXIWAY RESTRICTIONS AND CLOSURES EXPECTED NIGHTLY BETWEEN 2200 AND 0500 HOURS FOR THE ENTIRE PHASE DURATION OF A MAXIMUM OF 35 CALENDAR DAYS.

ARFF ACCESS ROUTES:
THERE IS NO ARFF AT THE AIRPORT.

CONSTRUCTION STAGING, DISPOSAL, AND CLEANOUT AREAS:
CONTRACTOR STAGING, DISPOSAL, AND CLEANOUT AREAS ARE IDENTIFIED ON THIS PLAN SHEET AND
CONSIST OF THE APPROXIMATE AREA AS SHOWN.

IMPACTS TO NAVAIDS:
THERE IS NO ANTICIPATED IMPACT TO NAVAIDS DURING THIS PHASE OF CONSTRUCTION.

LIGHTING, MARKING, AND SIGNING CHANGES:
RUNWAY EXIT SIGNS FOR TAXIWAY A1 SHALL BE COVERED. TAXIWAY DIRECTION AND LOCATION SIGNS FOR TAXIWAY A1 SHALL BE COVERED. TEMPORARY JUMPERS WILL BE INSTALLED AND CIRCUIT ISOLATION WILL BE DONE TO MAINTAIN CIRCUIT OPERATION IN THE AN2 INFIELD.

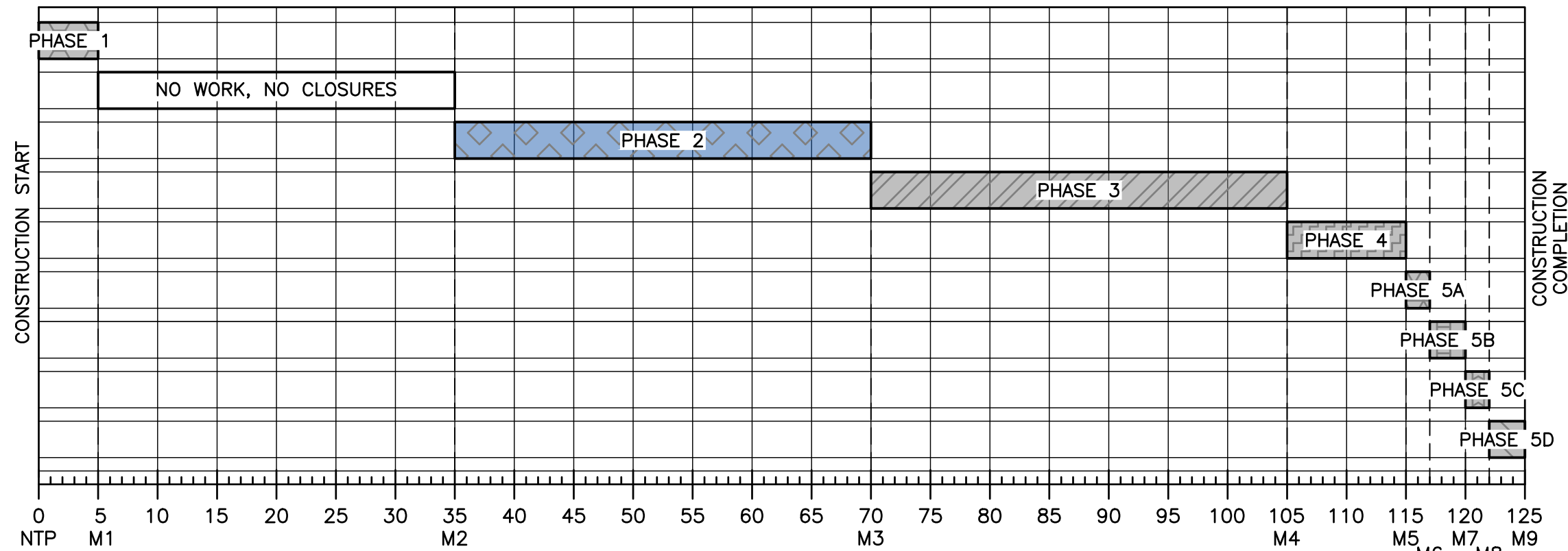
AVAILABLE RUNWAY LENGTH AND/OR REDUCED RSA AND ROFA TO REFLECT REDUCED ADG USE:
THE FULL LENGTH OF RUNWAY 3-21 IS AVAILABLE. THE RSA FOR RUNWAY 3-21 IS REDUCED TO 120'.
THE ROFA FOR RUNWAY 3-21 IS REDUCED TO 400'.

REQUIRED HAZARD MARKING, LIGHTING, AND SIGNING:
THE TAXIWAY A1 INTERSECTION SHALL BE CLOSED USING LOW PROFILE BARRICADES WITH RED (STEADY OR FLASHING) LIGHTS MOUNTED ON THE BARRICADE SPACED NO MORE THAN 10- FEET.
THE RUNWAY EXIT AT TAXIWAY A1 SHALL BE CLOSED USING A TEMPORARY YELLOW 'X'.

WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION:
LIGHTING EQUIPMENT MUST ADEQUATELY ILLUMINATE THE WORK AREA. ALL SUPPORT EQUIPMENT, EXCEPT HAUL TRUCKS, SHALL BE EQUIPPED WITH ARTIFICIAL ILLUMINATION.

LEAD TIMES REQUIRED FOR NOTIFICATIONS:
THE CONTRACTOR IS REQUIRED TO NOTIFY AIRPORT OPERATIONS A MINIMUM OF 72 HOURS IN ADVANCE TO PROVIDE REQUIRED NOTIFICATIONS.

PHASING SCHEDULE



LEGEND

	PHASE 1 – MAXIMUM 5 CALENDAR DAYS		PHASE 5A – MAXIMUM 2 CALENDAR DAYS
	PHASE 2 – MAXIMUM 35 CALENDAR DAYS		PHASE 5B – MAXIMUM 3 CALENDAR DAYS
	PHASE 3 – MAXIMUM 35 CALENDAR DAYS		PHASE 5C – MAXIMUM 2 CALENDAR DAYS
	PHASE 4 – MAXIMUM 10 CALENDAR DAYS		PHASE 5D – MAXIMUM 3 CALENDAR DAYS
			NO WORK, NO CLOSURES



Designed by: G. SHAW

Drawn by: A. SANTIL

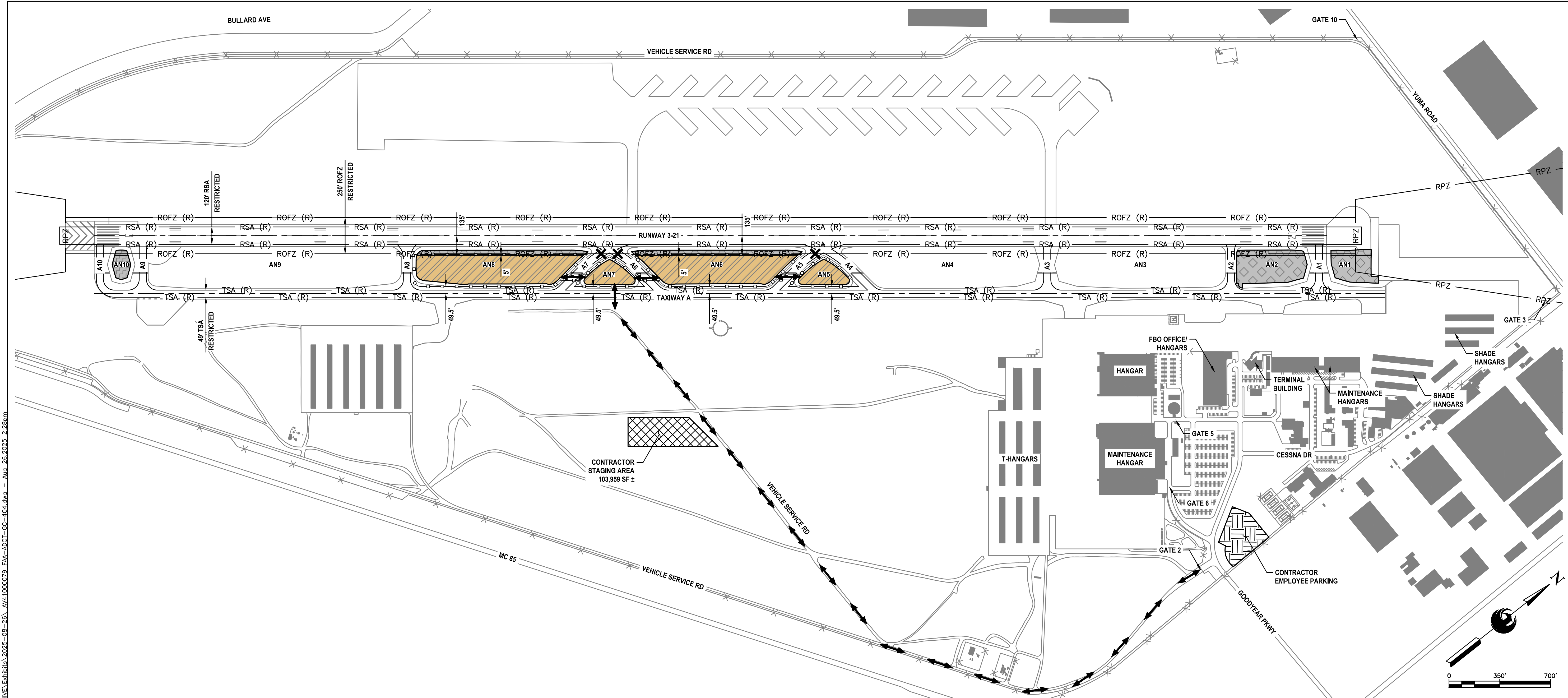
Checked by: C. JHAVE

Date: 08/29/20
Dwg scale: 1"=350'

CONSTRUCTION PHASING PLAN PHASE 2

SHEET
REFERENCE
NUMBER:
EXHIBIT
SHEET 03 OF 10

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NOTES:

1. AREAS SHOWN ARE INTENDED TO BE AN APPROXIMATE GEOGRAPHICAL REPRESENTATION.
2. THE CONTRACTOR SHALL COORDINATE THE LIMITS OF THE STAGING AND STORAGE AREA, THE LIMITS OF THE EMPLOYEE PARKING AND TEMPORARY FENCING WITH AIRPORT OPERATIONS PRIOR TO CONSTRUCTION.
3. CONTRACTOR CAN ACCESS THE SITE USING GATE 2. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM AIRPORT OPERATIONS REGARDING USE OF ANY GATE. AIRPORT OPERATIONS MAY ALLOW ACCESS FROM OTHER GATES, BASED ON AVAILABILITY OF SECURITY STAFF.
4. CONTRACTOR TO ENSURE THAT NO CONSTRUCTION TRAFFIC ENTERING SITE BACKS UP ON OR BLOCKS ANY PUBLIC STREET.
5. ANY EXISTING PAVEMENT AREA ALONG ANY HAUL ROUTE SHALL BE ADEQUATELY PROTECTED PER CIVIL TECHNICAL SPECIFICATION ITEM 34 PRIOR TO ANY HAULING ACTIVITIES.

PHASE 3 ELEMENTS:

PHASE 3 ACTIVITIES GENERALLY CONSIST OF PAVEMENT SAWCUT, GRADING AND EARTHWORK, EXCAVATION FOR AND INSTALLATION OF PIPE AND STORM DRAIN STRUCTURES, SUBGRADE COMPACTION.

AREAS CLOSED TO AIRCRAFT OPERATIONS:

RUNWAY 3-21 RESTRICTED TO RDC B-I AIRCRAFT.
ALL TAXIWAYS RESTRICTED TO ADG I (49'-FT) AIRCRAFT.
TAXIWAY A5, A6, A7 CLOSED.

DURATION OF CLOSURES:

RUNWAY AND TAXIWAY RESTRICTIONS AND CLOSURES EXPECTED NIGHTLY BETWEEN 2200 AND 0500 HOURS FOR THE ENTIRE PHASE DURATION OF A MAXIMUM OF 35 CALENDAR DAYS.

TAXI ROUTES OF REDUCED TSA AND TOFA TO REFLECT REDUCED ADG USE:

TAXI ROUTES ARE UNAFFECTED BUT FOR THE REDUCED TSA WIDTH TO 49' AND THE TOFA WIDTH TO 89'.

ARFF ACCESS ROUTES:

THERE IS NO ARFF AT THE AIRPORT.

CONSTRUCTION STAGING, DISPOSAL, AND CLEANOUT AREAS:

CONTRACTOR STAGING, DISPOSAL, AND CLEANOUT AREAS ARE IDENTIFIED ON THIS PLAN SHEET AND CONSIST OF THE APPROXIMATE AREA AS SHOWN.

IMPACTS TO NAVAIDS:

THERE IS NO ANTICIPATED IMPACT TO NAVAIDS DURING THIS PHASE OF CONSTRUCTION.

LIGHTING, MARKING, AND SIGNING CHANGES:

RUNWAY EXIT SIGNS FOR TAXIWAYS A5, A6, A7 SHALL BE COVERED. TAXIWAY DIRECTION AND LOCATION SIGNS FOR TAXIWAYS A5, A6, A7 SHALL BE COVERED. TEMPORARY JUMPERS WILL BE INSTALLED AND CIRCUIT ISOLATION WILL BE DONE TO MAINTAIN CIRCUIT OPERATION IN THE AN5 AND AN8 INFIELDS.

AVAILABLE RUNWAY LENGTH AND/OR REDUCED RSA AND ROFA TO REFLECT REDUCED ADG USE:

THE FULL LENGTH OF RUNWAY 3-21 IS AVAILABLE. THE RSA FOR RUNWAY 3-21 IS REDUCED TO 120'. THE ROFA FOR RUNWAY 3-21 IS REDUCED TO 400'.

REQUIRED HAZARD MARKING, LIGHTING, AND SIGNING:

THE TAXIWAY A5, A6, A7 INTERSECTION SHALL BE CLOSED USING LOW PROFILE BARRICADES WITH RED (STEADY OR FLASHING) LIGHTS MOUNTED ON THE BARRICADE SHALL BE SPACED NO MORE THAN 10-FEET. THE RUNWAY EXITS AT TAXIWAY A5, A6, A7 SHALL BE CLOSED USING A TEMPORARY YELLOW 'X'.

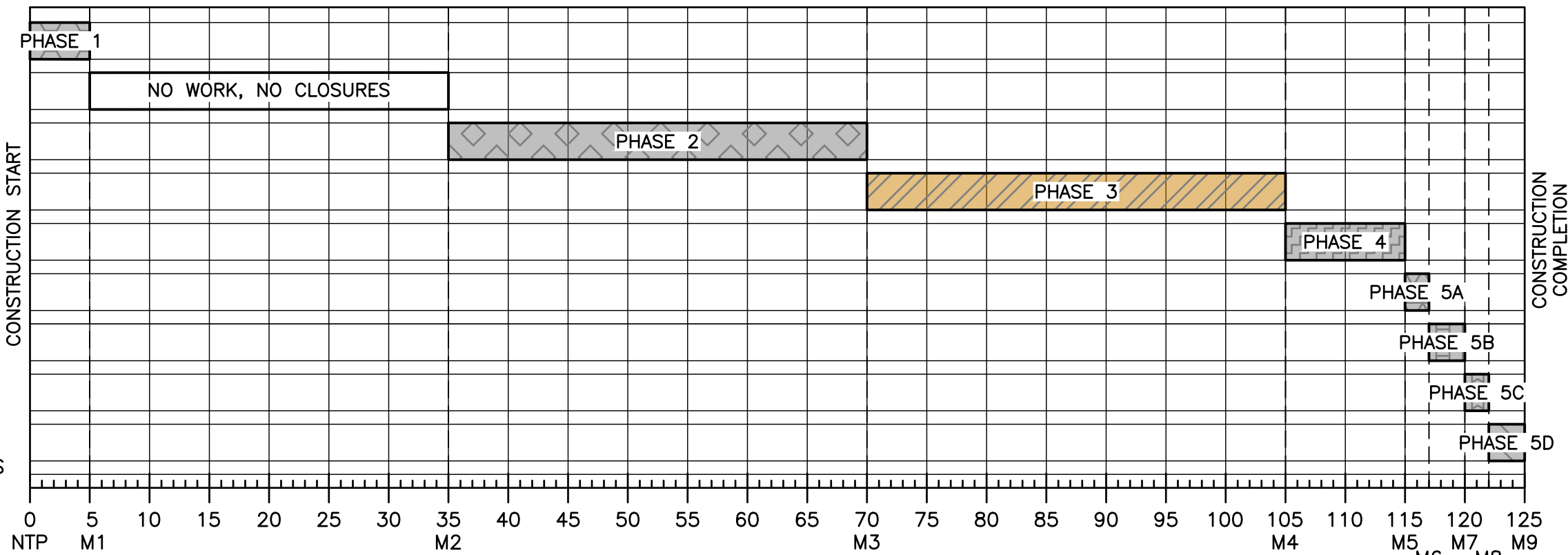
WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION:

LIGHTING EQUIPMENT MUST ADEQUATELY ILLUMINATE THE WORK AREA. ALL SUPPORT EQUIPMENT, EXCEPT HAUL TRUCKS, SHALL BE EQUIPPED WITH ARTIFICIAL ILLUMINATION.

LEAD TIMES REQUIRED FOR NOTIFICATIONS:

THE CONTRACTOR IS REQUIRED TO NOTIFY AIRPORT OPERATIONS A MINIMUM OF 72 HOURS IN ADVANCE TO PROVIDE REQUIRED NOTIFICATIONS.

PHASING SCHEDULE



LEGEND

PHASE 1 - MAXIMUM 5 CALENDAR DAYS	PHASE 5A - MAXIMUM 2 CALENDAR DAYS
PHASE 2 - MAXIMUM 35 CALENDAR DAYS	PHASE 5B - MAXIMUM 3 CALENDAR DAYS
PHASE 3 - MAXIMUM 35 CALENDAR DAYS	PHASE 5C - MAXIMUM 2 CALENDAR DAYS
PHASE 4 - MAXIMUM 10 CALENDAR DAYS	PHASE 5D - MAXIMUM 3 CALENDAR DAYS
	NO WORK, NO CLOSURES



- LEGEND**
- CONTRACTOR HAUL ROUTE
 - TAXIWAY CLOSURE MARKER
 - RPZ — RUNWAY PROTECTION ZONE
 - RSA (R) — RESTRICTED RUNWAY SAFETY AREA
 - TSA (R) — RESTRICTED TAXIWAY SAFETY AREA
 - ROFZ (R) — RESTRICTED RUNWAY OBSTACLE FREE ZONE
 - LOW LEVEL BARRICADES (40' SPACING)
 - VERTICAL PANEL BARRICADES (40' SPACING)
 - CONTRACTOR STAGING AREA
 - EMPLOYEE PARKING AREA

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TRACER CONSULTING

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SUB CONSULTANT

EXHIBIT

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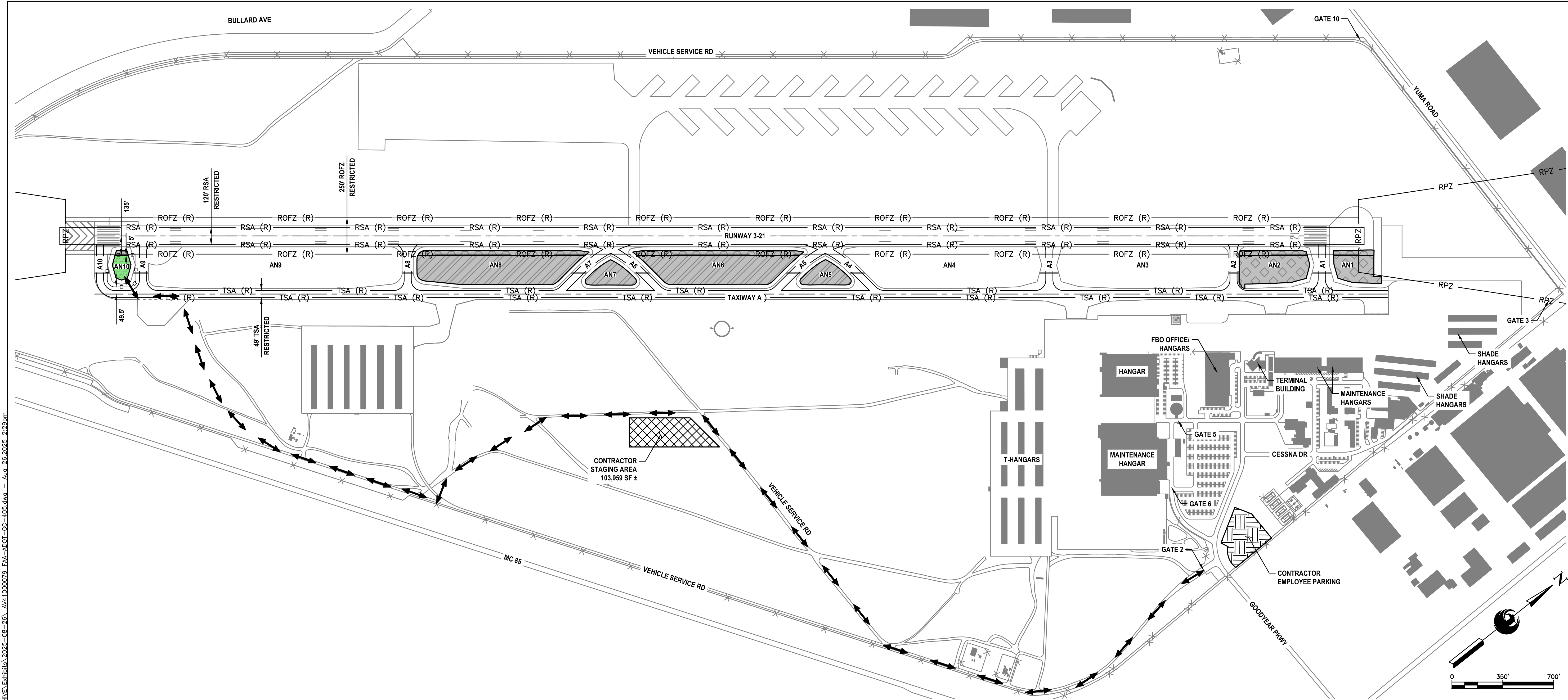
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5. ANY EXISTING PAVEMENT AREA ALONG ANY HAUL ROUTE SHALL BE ADEQUATELY PROTECTED PER CIVIL TECHNICAL SPECIFICATION ITEM 34 PRIOR TO ANY HAULING ACTIVITIES.

PHASE 4 ELEMENTS:

PHASE 4 ACTIVITIES GENERALLY CONSIST OF PAVEMENT SAWCUT, GRADING AND EARTHWORK, EXCAVATION FOR AND INSTALLATION OF PIPE AD STORM DRAIN STRUCTURES, SUBGRADE COMPACTION.

AREAS CLOSED TO AIRCRAFT OPERATIONS:

RUNWAY 3-21 RESTRICTED TO RDC B-I AIRCRAFT.
ALL TAXIWAYS RESTRICTED TO ADG I (49'-FT) AIRCRAFT.

DURATION OF CLOSURES:

RUNWAY AND TAXIWAY RESTRICTIONS AND CLOSURES EXPECTED NIGHTLY BETWEEN 2200 AND 0500 HOURS FOR THE ENTIRE PHASE DURATION OF A MAXIMUM OF 10 CALENDAR DAYS.

TAXI ROUTES OF REDUCED TSA AND TOFA TO REFLECT REDUCED ADG USE:

TAXI ROUTES ARE UNAFFECTED BUT FOR THE REDUCED TSA WIDTH TO 49' AND THE TOFA WIDTH TO 89'.

ARFF ACCESS ROUTES:

THERE IS NO ARFF AT THE AIRPORT.

CONSTRUCTION STAGING, DISPOSAL, AND CLEANOUT AREAS:

CONTRACTOR STAGING, DISPOSAL, AND CLEANOUT AREAS ARE IDENTIFIED ON THIS PLAN SHEET AND CONSIST OF THE APPROXIMATE AREA AS SHOWN.

IMPACTS TO NAVAIDS:

THERE IS NO ANTICIPATED IMPACT TO NAVAIDS DURING THIS PHASE OF CONSTRUCTION.

LIGHTING, MARKING, AND SIGNING CHANGES:

NO LIGHTING, MARKING, AND SIGNING CHANGES ARE ANTICIPATED FOR THIS PHASE.

AVAILABLE RUNWAY LENGTH AND/OR REDUCED RSA AND ROFA TO REFLECT REDUCED ADG USE:

THE FULL LENGTH OF RUNWAY 3-21 IS AVAILABLE. THE RSA FOR RUNWAY 3-21 IS REDUCED TO 120'. THE ROFA FOR RUNWAY 3-21 IS REDUCED TO 400'.

REQUIRED HAZARD MARKING, LIGHTING, AND SIGNING:

LOW PROFILE BARRICADES WITH RED (STEADY OR FLASHING) LIGHTS MOUNTED ON THE BARRICADE SPACED NO MORE THAN 10-FEET.

WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION:

LIGHTING EQUIPMENT MUST ADEQUATELY ILLUMINATE THE WORK AREA. ALL SUPPORT EQUIPMENT, EXCEPT HAUL TRUCKS, SHALL BE EQUIPPED WITH ARTIFICIAL ILLUMINATION.

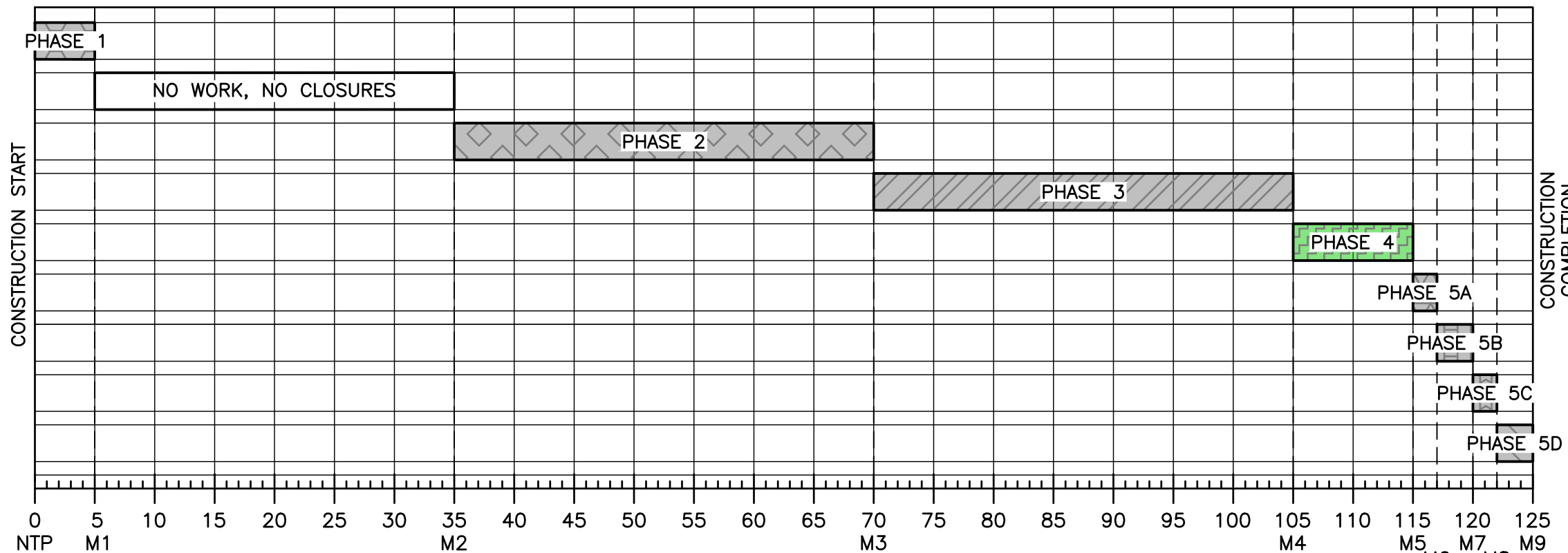
LEAD TIMES REQUIRED FOR NOTIFICATIONS:

THE CONTRACTOR IS REQUIRED TO NOTIFY AIRPORT OPERATIONS A MINIMUM OF 72 HOURS IN ADVANCE TO PROVIDE REQUIRED NOTIFICATIONS.

LEGEND

- CONTRACTOR HAUL ROUTE
- RPZ — RUNWAY PROTECTION ZONE
- RSA (R) — RESTRICTED RUNWAY SAFETY AREA
- TSA (R) — RESTRICTED TAXIWAY SAFETY AREA
- ROFZ (R) — RESTRICTED RUNWAY OBSTACLE FREE ZONE
- VERTICAL PANEL BARRICADES (40' SPACING)
- CONTRACTOR STAGING AREA
- EMPLOYEE PARKING AREA

PHASING SCHEDULE



LEGEND

- PHASE 1 — MAXIMUM 5 CALENDAR DAYS
- PHASE 2 — MAXIMUM 35 CALENDAR DAYS
- PHASE 3 — MAXIMUM 35 CALENDAR DAYS
- PHASE 4 — MAXIMUM 10 CALENDAR DAYS
- PHASE 5A — MAXIMUM 2 CALENDAR DAYS
- PHASE 5B — MAXIMUM 3 CALENDAR DAYS
- PHASE 5C — MAXIMUM 2 CALENDAR DAYS
- PHASE 5D — MAXIMUM 3 CALENDAR DAYS
- NO WORK, NO CLOSURES



PRIME CONSULTANT
TRACE CONSULTING
1071 E. Jefferson St., Suite 311 Phoenix, AZ 85004

SUB CONSULTANT

EXHIBIT

NO	REVISIONS / SUBMISSIONS	DATE

PRIME CONSULTANT
PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

SUB CONSULTANT

GOODYEAR AIRPORT
INFIELD PAVING
PHASE II
AV 41000079 ADOT

ADOT GRANT NO.: E3S21 01C & E4SSM 01C

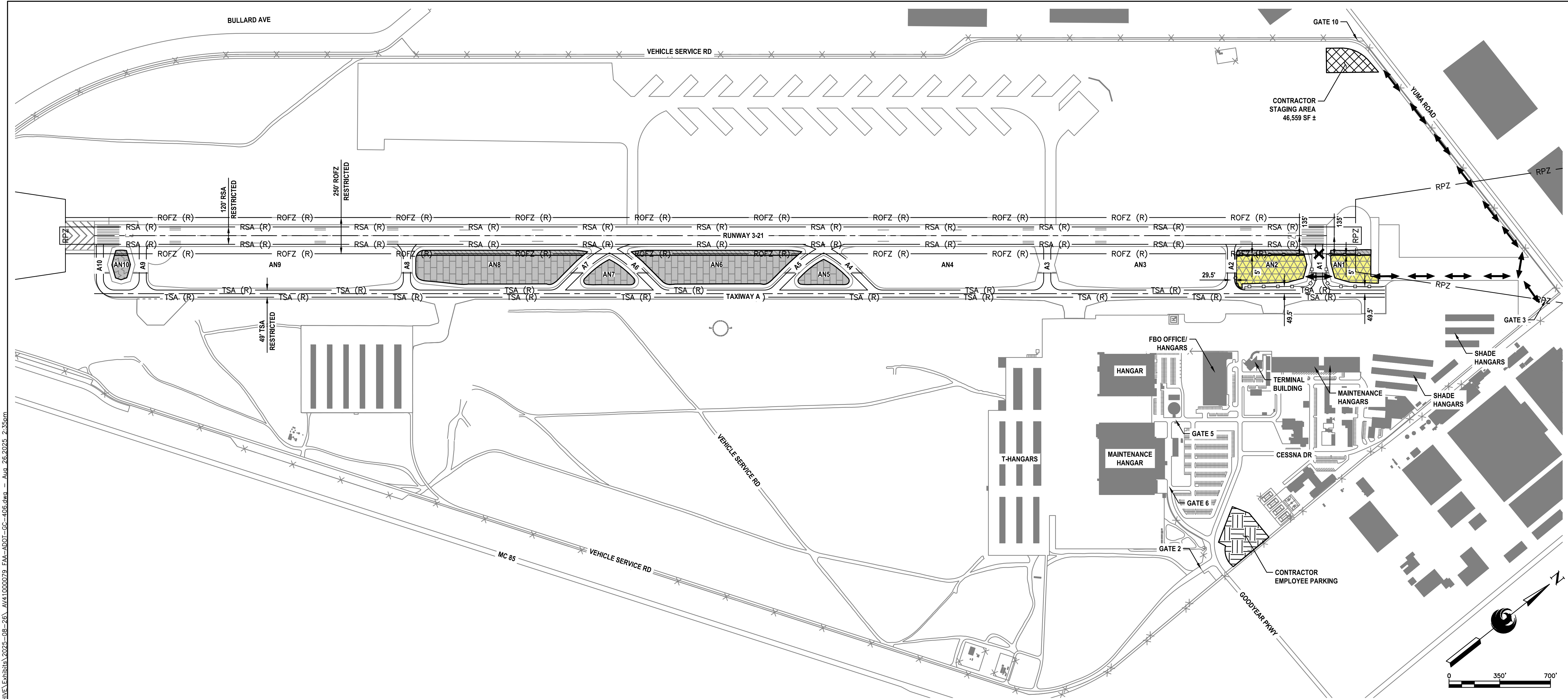
Designed by: G. SHAW
Drawn by: A. SANTILLI
Checked by: C. JHAVERI
Date: 08/29/2025
Dwg scale: 1"=350'

SHEET OVERVIEW TITLE

CONSTRUCTION PHASING PLAN
PHASE 4

SHEET REFERENCE NUMBER:
EXHIBIT
SHEET 05 OF 10

N:\2024\240303 - GVR Infield Paving Phase 1 Design Reports\CSPF\ARCHIVE\Exhibits\2025-08-26\AV41000079 FAA-A001-GC-406.dwg - Aug 26 2025 2:35pm



NOTES:

1. AREAS SHOWN ARE INTENDED TO BE AN APPROXIMATE GEOGRAPHICAL REPRESENTATION.
2. THE CONTRACTOR SHALL COORDINATE THE LIMITS OF THE STAGING AND STORAGE AREA, THE LIMITS OF THE EMPLOYEE PARKING AND TEMPORARY FENCING WITH AIRPORT OPERATIONS PRIOR TO CONSTRUCTION.
3. CONTRACTOR CAN ACCESS THE SITE USING GATE 3. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM AIRPORT OPERATIONS REGARDING USE OF ANY GATE. AIRPORT OPERATIONS MAY ALLOW ACCESS FROM OTHER GATES, BASED ON AVAILABILITY OF SECURITY STAFF.
4. CONTRACTOR TO ENSURE THAT NO CONSTRUCTION TRAFFIC ENTERING SITE BACKS UP ON OR BLOCKS ANY PUBLIC STREET.
5. ANY EXISTING PAVEMENT AREA ALONG ANY HAUL ROUTE SHALL BE ADEQUATELY PROTECTED PER CIVIL TECHNICAL SPECIFICATION ITEM 34 PRIOR TO ANY HAULING ACTIVITIES.

PHASE 5A ELEMENTS:

PHASE 5A ACTIVITIES GENERALLY CONSIST OF INFIELD PAVING.

AREAS CLOSED TO AIRCRAFT OPERATIONS:

RUNWAY 3-21 RESTRICTED TO RDC B-I AIRCRAFT.
ALL TAXIWAYS RESTRICTED TO ADG 1 (49-FT) AIRCRAFT.
TAXIWAY A1 CLOSED.

DURATION OF CLOSURES:

RUNWAY AND TAXIWAY RESTRICTIONS AND CLOSURES EXPECTED DAILY BETWEEN 0600 AND 1800 HOURS FOR THE ENTIRE PHASE DURATION OF A MAXIMUM OF 2 CALENDAR DAYS.

TAXI ROUTES OF REDUCED TSA AND TOFA TO REFLECT REDUCED ADG USE:

TAXI ROUTES ARE UNAFFECTED BUT FOR THE REDUCED TSA WIDTH TO 49' AND THE TOFA WIDTH TO 89'.

ARFF ACCESS ROUTES:

THERE IS NO ARFF AT THE AIRPORT.

CONSTRUCTION STAGING, DISPOSAL, AND CLEANOUT AREAS:

CONTRACTOR STAGING, DISPOSAL, AND CLEANOUT AREAS ARE IDENTIFIED ON THIS PLAN SHEET AND CONSIST OF THE APPROXIMATE AREA AS SHOWN.

IMPACTS TO NAVAIDS:

THERE IS NO ANTICIPATED IMPACT TO NAVAIDS DURING THIS PHASE OF CONSTRUCTION.

LIGHTING, MARKING, AND SIGNING CHANGES:

RUNWAY EXIT SIGNS FOR TAXIWAY A1 SHALL BE COVERED. TAXIWAY DIRECTION AND LOCATION SIGNS FOR TAXIWAY A2 SHALL BE COVERED. TEMPORARY JUMPERS WILL BE INSTALLED AND CIRCUIT ISOLATION WILL BE DONE TO MAINTAIN CIRCUIT OPERATION IN THE AN2 INFIELD.

AVAILABLE RUNWAY LENGTH AND/OR REDUCED RSA AND ROFA TO REFLECT REDUCED ADG USE:

THE FULL LENGTH OF RUNWAY 3-21 IS AVAILABLE. THE RSA FOR RUNWAY 3-21 IS REDUCED TO 120'. THE ROFA FOR RUNWAY 3-21 IS REDUCED TO 400'.

REQUIRED HAZARD MARKING, LIGHTING, AND SIGNING:

THE TAXIWAY A1 INTERSECTION SHALL BE CLOSED USING LOW PROFILE BARRICADES WITH RED (STEADY OR FLASHING) LIGHTS MOUNTED ON THE BARRICADE SHALL BE SPACED NO MORE THAN 10-FEET.
THE RUNWAY EXIT AT TAXIWAY A1 SHALL BE CLOSED USING A TEMPORARY YELLOW 'X'.

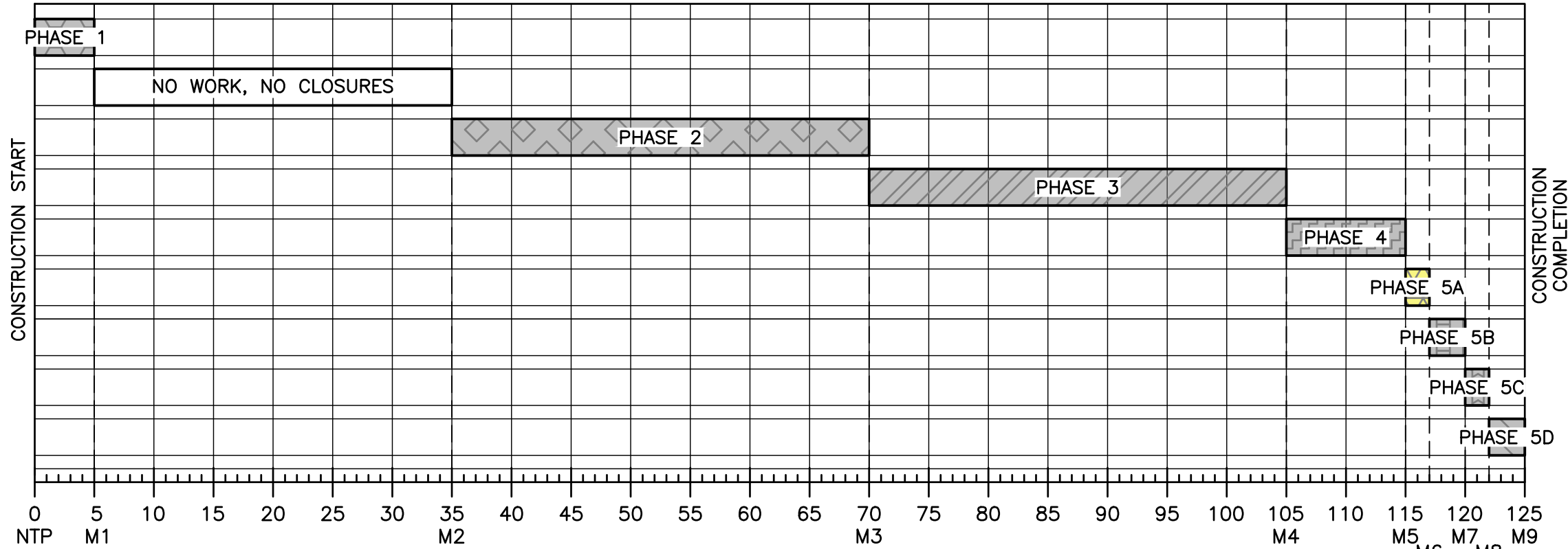
WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION:

NOT APPLICABLE DURING THIS PHASE.

LEAD TIMES REQUIRED FOR NOTIFICATIONS:

THE CONTRACTOR IS REQUIRED TO NOTIFY AIRPORT OPERATIONS A MINIMUM OF 72 HOURS IN ADVANCE TO PROVIDE REQUIRED NOTIFICATIONS.

PHASING SCHEDULE



LEGEND

	PHASE 1 - MAXIMUM 5 CALENDAR DAYS		PHASE 5A - MAXIMUM 2 CALENDAR DAYS
	PHASE 2 - MAXIMUM 35 CALENDAR DAYS		PHASE 5B - MAXIMUM 3 CALENDAR DAYS
	PHASE 3 - MAXIMUM 35 CALENDAR DAYS		PHASE 5C - MAXIMUM 2 CALENDAR DAYS
	PHASE 4 - MAXIMUM 10 CALENDAR DAYS		PHASE 5D - MAXIMUM 3 CALENDAR DAYS
	NO WORK, NO CLOSURES		



LEGEND

	CONTRACTOR HAUL ROUTE
	TAXIWAY CLOSURE MARKER
	RPZ - RUNWAY PROTECTION ZONE
	RSA (R) - RESTRICTED RUNWAY SAFETY AREA
	TSA (R) - RESTRICTED TAXIWAY SAFETY AREA
	ROFZ (R) - RESTRICTED RUNWAY OBSTACLE FREE ZONE
	LOW LEVEL BARRICADES (40' SPACING)
	VERTICAL PANEL BARRICADES (40' SPACING)
	CONTRACTOR STAGING AREA
	EMPLOYEE PARKING AREA

PRIME CONSULTANT
TRACE CONSULTING
1071 E. Jefferson St., Suite 110 Phoenix, AZ 85004

SUB CONSULTANT

EXHIBIT

NO	REVISIONS / SUBMISSIONS	DATE

PRIME CONSULTANT
PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

GOODYEAR AIRPORT
INFIELD PAVING
PHASE II
AV 41000079 ADOT

ADOT GRANT NO.: E3S21 01C & E4SSM 01C

DESIGNED BY: G. SHAW
DRAWN BY: A. SANTILLI
CHECKED BY: C. JHAVERI
DATE: 08/29/2025
DWG SCALE: 1"=350'

SHEET OVERVIEW TITLE

CONSTRUCTION PHASING PLAN
PHASE 5A

SHEET REFERENCE NUMBER:
EXHIBIT
SHEET 06 OF 10

1. AREAS SHOWN ARE INTENDED TO BE AN APPROXIMATE GEOGRAPHICAL REPRESENTATION.
2. THE CONTRACTOR SHALL COORDINATE THE LIMITS OF THE STAGING AND STORAGE AREA, THE LIMITS OF THE EMPLOYEE PARKING AND TEMPORARY FENCING WITH AIRPORT OPERATIONS PRIOR TO CONSTRUCTION.
3. CONTRACTOR CAN ACCESS THE SITE USING GATE 2. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM AIRPORT OPERATIONS REGARDING USE OF ANY GATE. AIRPORT OPERATIONS MAY ALLOW ACCESS FROM OTHER GATES, BASED ON AVAILABILITY OF SECURITY STAFF.
4. CONTRACTOR TO ENSURE THAT NO CONSTRUCTION TRAFFIC ENTERING SITE BACKS UP ON OR BLOCKS ANY PUBLIC STREET.
5. ANY EXISTING PAVEMENT AREA ALONG ANY HAUL ROUTE SHALL BE ADEQUATELY PROTECTED PER CIVIL TECHNICAL SPECIFICATION ITEM 34 PRIOR TO ANY HAULING ACTIVITIES.

	CONTRACTOR HAUL ROUTE
	TAXIWAY CLOSURE MARKER
	RPZ — RUNWAY PROTECTION ZONE
	RSA (R) — RESTRICTED RUNWAY SAFETY AREA
	TSA (R) — RESTRICTED TAXIWAY SAFETY AREA
	ROFZ (R) — RESTRICTED RUNWAY OBSTACLE FREE ZONE
	LOW LEVEL BARRICADES (40' SPACING)
	VERTICAL PANEL BARRICADES (40' SPACING)
	CONTRACTOR STAGING AREA
	EMPLOYEE PARKING AREA

AREAS CLOSED TO AIRCRAFT OPERATIONS:
 RUNWAY 3-21 RESTRICTED TO RDC B-I AIRCRAFT.
 ALL TAXIWAYS RESTRICTED TO ADG I (49-FT) AIRCRAFT.
 TAXIWAYS A5, A6, A7 CLOSED.

TAXI ROUTES OF REDUCED TSA AND TOFA TO REFLECT REDUCED ADG USE:
TAXI ROUTES ARE UNAFFECTED BUT FOR THE REDUCED TSA WIDTH TO 49' AND THE TOFA WIDTH TO 89'.

CONSTRUCTION STAGING, DISPOSAL, AND CLEANOUT AREAS:
CONTRACTOR STAGING, DISPOSAL, AND CLEANOUT AREAS ARE IDENTIFIED ON THIS PLAN SHEET AND CONSIST OF THE APPROXIMATE AREA AS SHOWN.

LIGHTING, MARKING, AND SIGNING CHANGES:
RUNWAY EXIT SIGNS FOR TAXIWAYS A5, A6, AND A7 SHALL BE COVERED. TAXIWAY DIRECTION AND LOCATION SIGNS FOR TAXIWAYS A5, A6, AND A7 SHALL BE COVERED. TEMPORARY JUMPERS WILL BE INSTALLED AND CIRCUIT ISOLATION WILL BE DONE TO MAINTAIN CIRCUIT OPERATION IN THE AN... INFIELD.

REQUIRED HAZARD MARKING, LIGHTING, AND SIGNING:
THE TAXIWAYS A5, A6, A7 INTERSECTION SHALL BE CLOSED USING LOW PROFILE BARRICADES WITH RED (STEADY OR FLASHING) LIGHTS MOUNTED ON THE BARRICADE SHALL BE SPACED NO MORE THAN 10- FEET.
THE RUNWAY EXIT AT TAXIWAY A5, A6, A7 SHALL BE CLOSED USING A TEMPORARY YELLOW 'X'.

LEAD TIMES REQUIRED FOR NOTIFICATIONS:
THE CONTRACTOR IS REQUIRED TO NOTIFY AIRPORT OPERATIONS A MINIMUM OF 72 HOURS IN ADVANCE TO PROVIDE REQUIRED NOTIFICATIONS.

CONSTRUCTION START

PHASE 1

NO WORK, NO CLOSURES

PHASE 2

PHASE 3

PHASE 4

PHASE 5A

PHASE 5B

PHASE 5C

PHASE 5D

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130

NTP M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12

	PHASE 1 – MAXIMUM 5 CALENDAR DAYS		PHASE 5A – MAXIMUM 2 CALENDAR DAYS
	PHASE 2 – MAXIMUM 35 CALENDAR DAYS		PHASE 5B – MAXIMUM 3 CALENDAR DAYS
	PHASE 3 – MAXIMUM 35 CALENDAR DAYS		PHASE 5C – MAXIMUM 2 CALENDAR DAYS
	PHASE 4 – MAXIMUM 10 CALENDAR DAYS		PHASE 5D – MAXIMUM 3 CALENDAR DAYS
			NO WORK, NO CLOSURES

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811

Call 811 or click Arizona811.com

PROJECT OVERVIEW TITLE	CONSTRUCTION PHASING PLAN PHASE 5B

SHEET
REFERENCE
NUMBER:
EXHIBIT
SHEET 07 OF 10

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX"

PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT
**GOODYEAR AIRPORT
INFIELD PAVING
PHASE II**
AV 41000079 ADOT

EXHIBIT

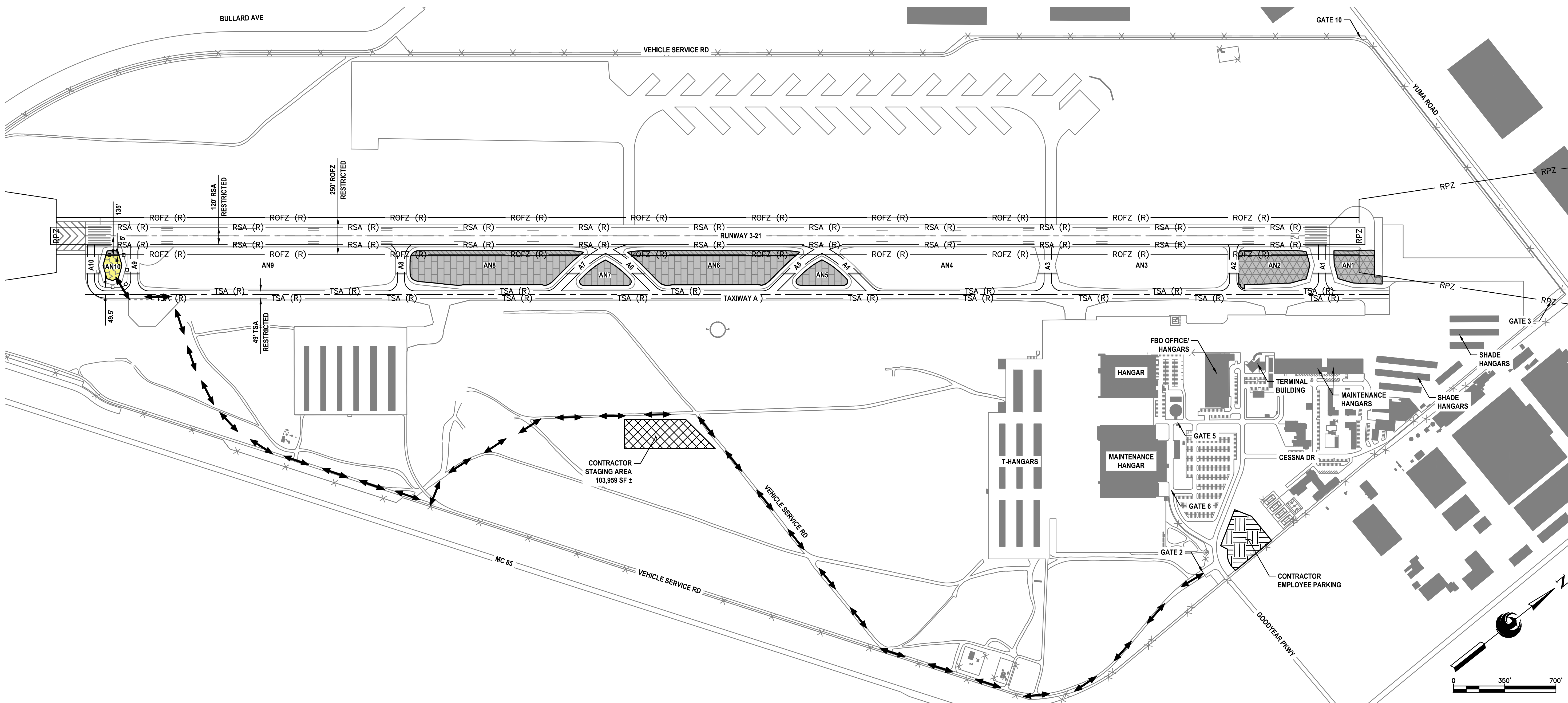
TANT
TRACE
CONSULTING
201 E. Jefferson St. | Suite 3 | Phoenix, AZ 85034

PRIME CONSULTANT

T

1201 E

SUB CONSULTANT



	CONTRACTOR HAUL ROUTE
— RPZ —	RUNWAY PROTECTION ZONE
— RSA (R) —	RESTRICTED RUNWAY SAFETY AREA
— TSA (R) —	RESTRICTED TAXIWAY SAFETY AREA
— ROFZ (R) —	RESTRICTED RUNWAY OBSTACLE FREE ZONE
	VERTICAL PANEL BARRICADES (40' SPACING)
	CONTRACTOR STAGING AREA
	EMPLOYEE PARKING AREA

1. AREAS SHOWN ARE INTENDED TO BE AN APPROXIMATE GEOGRAPHICAL REPRESENTATION.
2. THE CONTRACTOR SHALL COORDINATE THE LIMITS OF THE STAGING AND STORAGE AREA, THE LIMITS OF THE EMPLOYEE PARKING AND TEMPORARY FENCING WITH AIRPORT OPERATIONS PRIOR TO CONSTRUCTION.
3. CONTRACTOR CAN ACCESS THE SITE USING GATE 2. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM AIRPORT OPERATIONS REGARDING USE OF ANY GATE. AIRPORT OPERATIONS MAY ALLOW ACCESS FROM OTHER GATES, BASED ON AVAILABILITY OF SECURITY STAFF.
4. CONTRACTOR TO ENSURE THAT NO CONSTRUCTION TRAFFIC ENTERING SITE BACKS UP ON OR BLOCKS ANY PUBLIC STREET.
5. ANY EXISTING PAVEMENT AREA ALONG ANY HAUL ROUTE SHALL BE ADEQUATELY PROTECTED PER CIVIL TECHNICAL SPECIFICATION ITEM 34 PRIOR TO ANY HAULING ACTIVITIES.

DURATION OF CLOSURES:
RUNWAY AND TAXIWAY RESTRICTIONS AND CLOSURES EXPECTED DAILY BETWEEN 0600 AND 1800 HOURS FOR THE ENTIRE
PHASE DURATION OF A MAXIMUM OF 2 CALENDAR DAYS.

TAXI ROUTES OF REDUCED TSA AND TOFA TO REFLECT REDUCED ADG USE:
TAXI ROUTES ARE UNAFFECTED BUT FOR THE REDUCED TSA WIDTH TO 49' AND THE TOFA WIDTH TO 89'.

CONSTRUCTION STAGING, DISPOSAL, AND CLEANOUT AREAS:
CONTRACTOR STAGING, DISPOSAL, AND CLEANOUT AREAS ARE IDENTIFIED ON THIS PLAN SHEET AND CONSIST OF THE APPROXIMATE AREA AS SHOWN.

THE FULL LENGTH OF RUNWAY 3-21 IS AVAILABLE. THE RSA FOR RUNWAY 3-21 IS REDUCED TO 120'. THE ROFA FOR RUNWAY 3-21 IS REDUCED TO 400'.

LOW PROFILE BARRICADES WITH RED (STEADY OR FLASHING) LIGHTS MOUNTED ON THE BARRICADE SHALL BE SPACED NO MORE THAN 10- FEET.

LEAD TIMES REQUIRED FOR NOTIFICATIONS:
THE CONTRACTOR IS REQUIRED TO NOTIFY AIRPORT OPERATIONS A MINIMUM OF 72 HOURS IN ADVANCE TO PROVIDE REQUIRED NOTIFICATIONS.

The Gantt chart illustrates the construction schedule for the 1000th Street Bridge. The timeline is marked from 0 to 125, with vertical grid lines every 5 units. The construction phases are as follows:

- Phase 1:** NO WORK, NO CLOSURES (0 to 35)
- Phase 2:** Construction begins at month 35 and continues through month 70.
- Phase 3:** Construction continues from month 70 to month 105.
- Phase 4:** Construction continues from month 105 to month 115.
- Phase 5:** Construction continues from month 115 to month 120, subdivided into:
 - 5A: Month 115 to 116
 - 5B: Month 116 to 117
 - 5C: Month 117 to 118
 - 5D: Month 118 to 120

The chart also indicates the start and completion of construction. The start of construction is marked at month 35, and the completion is marked at month 120.

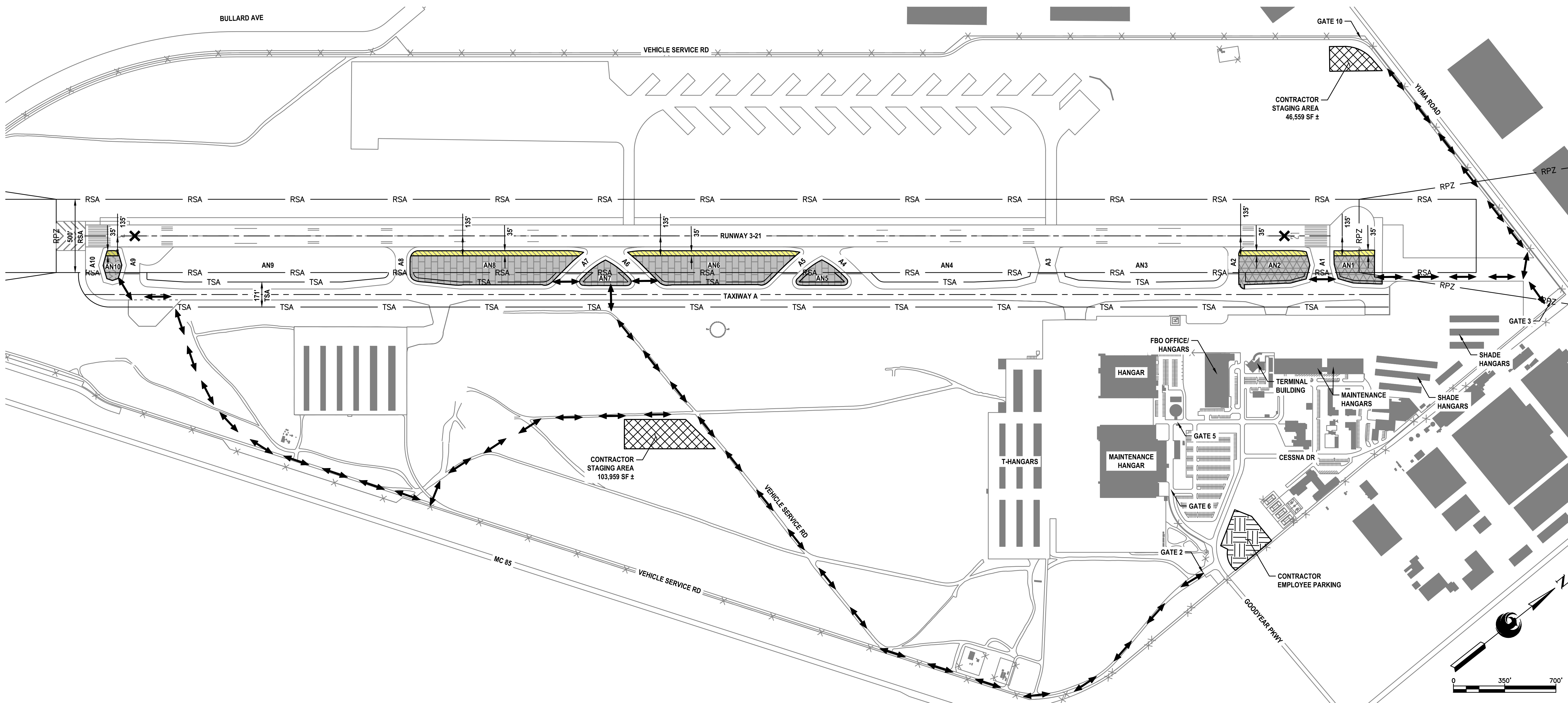
	PHASE 1 – MAXIMUM 5 CALENDAR DAYS		PHASE 5A – MAXIMUM 2 CALENDAR DAYS
	PHASE 2 – MAXIMUM 35 CALENDAR DAYS		PHASE 5B – MAXIMUM 3 CALENDAR DAYS
	PHASE 3 – MAXIMUM 35 CALENDAR DAYS		PHASE 5C – MAXIMUM 2 CALENDAR DAYS
	PHASE 4 – MAXIMUM 10 CALENDAR DAYS		PHASE 5D – MAXIMUM 3 CALENDAR DAYS
			NO WORK, NO CLOSURES



OF 1

OF 1

OF 1



	CONTRACTOR HAUL ROUTE
	RUNWAY CLOSURE MARKER
	RUNWAY PROTECTION ZONE
	RUNWAY SAFETY AREA
	TAXIWAY SAFETY AREA
	CONTRACTOR STAGING AREA
	EMPLOYEE PARKING AREA

1. AREAS SHOWN ARE INTENDED TO BE AN APPROXIMATE GEOGRAPHICAL REPRESENTATION.
2. THE CONTRACTOR SHALL COORDINATE THE LIMITS OF THE STAGING AND STORAGE AREA, THE LIMITS OF THE EMPLOYEE PARKING AND TEMPORARY FENCING WITH AIRPORT OPERATIONS PRIOR TO CONSTRUCTION.
3. CONTRACTOR CAN ACCESS THE SITE USING GATE 2 AND 3. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM AIRPORT OPERATIONS REGARDING USE OF ANY GATE. AIRPORT OPERATIONS MAY ALLOW ACCESS FROM OTHER GATES, BASED ON AVAILABILITY OF SECURITY STAFF.
4. CONTRACTOR TO ENSURE THAT NO CONSTRUCTION TRAFFIC ENTERING SITE BACKS UP ON OR BLOCKS ANY PUBLIC STREET.
5. ANY EXISTING PAVEMENT AREA ALONG ANY HAUL ROUTE SHALL BE ADEQUATELY PROTECTED PER CIVIL TECHNICAL SPECIFICATION ITEM 34 PRIOR TO ANY HAULING ACTIVITIES.

DURATION OF CLOSURES:
RUNWAY AND TAXIWAY RESTRICTIONS AND CLOSURES EXPECTED FOR THE ENTIRE PHASE DURATION OF A MAXIMUM OF 3 CALENDAR DAYS.

DURATION OF CLOSURES:
RUNWAY AND TAXIWAY RESTRICTIONS AND CLOSURES EXPECTED FOR THE ENTIRE PHASE DURATION OF A MAXIMUM OF 3 CALENDAR DAYS.

AIRCRAFT SHOULD NOT BE OPERATING WITHIN THE MOVEMENT AREA. CONTRACTOR SHALL COORDINATE WITH GYR OPERATIONS STAFF FOR ANY AIRCRAFT TAXIING MOVEMENTS.

CONSTRUCTION STAGING, DISPOSAL, AND CLEANOUT AREAS:
CONTRACTOR STAGING, DISPOSAL, AND CLEANOUT AREAS ARE IDENTIFIED ON THIS PLAN SHEET AND CONSIST OF THE
APPROXIMATE AREA AS SHOWN.

LIGHTING, MARKING, AND SIGNING CHANGES:
RUNWAY AND TAXIWAY LIGHTING TO BE OFF THROUGHOUT DURATION OF THIS PHASE.

AVAILABLE RUNWAY LENGTH AND/OR REDUCED RSA AND ROFA TO REFLECT REDUCED ADG USE:

REQUIRED HAZARD MARKING, LIGHTING, AND SIGNING:
LIGHTED "X" TO BE PLACED AT EACH END OF RUNWAY 3-21 THROUGHOUT DURATION OF THIS PHASE.

LEAD TIMES REQUIRED FOR NOTIFICATIONS:
THE CONTRACTOR IS REQUIRED TO NOTIFY AIRPORT OPERATIONS A MINIMUM OF 72 HOURS IN ADVANCE TO PROVIDE REQUIRED NOTIFICATIONS.

The Gantt chart illustrates the construction schedule for the NTP M1 to M9 project. The timeline is marked in months from 0 to 125. The construction phases are as follows:

- PHASE 1:** 0 to 5 months.
- NO WORK, NO CLOSURES:** 5 to 35 months.
- PHASE 2:** 35 to 70 months.
- PHASE 3:** 70 to 105 months.
- PHASE 4:** 105 to 115 months.
- PHASE 5:** 115 to 125 months, subdivided into:
 - PHASE 5A:** 115 to 117 months.
 - PHASE 5B:** 117 to 119 months.
 - PHASE 5C:** 119 to 121 months.
 - PHASE 5D:** 121 to 123 months.

The chart also includes a vertical axis for 'CONSTRUCTION START' and a horizontal axis for time in months, with major ticks every 5 months and minor ticks every 1 month. A vertical line at month 0 is labeled 'NTP' and a vertical line at month 125 is labeled 'M9'.

	PHASE 1 – MAXIMUM 5 CALENDAR DAYS		PHASE 5A – MAXIMUM 2 CALENDAR DAYS
	PHASE 2 – MAXIMUM 35 CALENDAR DAYS		PHASE 5B – MAXIMUM 3 CALENDAR DAYS
	PHASE 3 – MAXIMUM 35 CALENDAR DAYS		PHASE 5C – MAXIMUM 2 CALENDAR DAYS
	PHASE 4 – MAXIMUM 10 CALENDAR DAYS		PHASE 5D – MAXIMUM 3 CALENDAR DAYS
			NO WORK, NO CLOSURES

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA 811

Call 811 or click Arizona811.com

Designed by: G. SHAW
Drawn by: A. SANTIL
Checked by: C. JHAVEE
Date: 08/29/20
Dwg scale: 1"=350'

PROJECT OVERVIEW TITLE	CONSTRUCTION PHASING PLAN PHASE 5D

SHEET
REFERENCE
NUMBER:
EXHIBIT
SHEET 09 OF 10

[illegible]

PHX DOT GVR
CITY OF PHOENIX AVIATION DEPARTMENT
**GOODYEAR AIRPORT
INFIELD PAVING
PHASE II**
AV 41000079 ADOT

PRIME CONSULTANT

T

C O

1201 E. J.

SUB CONSULTANT

EXHIBIT

NO	REVISIONS / SUBMISSIONS	DATE

APPENDIX B
BARRICADE EXAMPLES

N:\2024\240303 - GVR Infield Paving Ph II\240303.01 GVR Infield Paving Phase II Design\Reports\CSPE\ARCHIVE\Exhibits\2025-08-26 AV41000079 FAA-ADOT-GC-501.dwg -- Aug 26 2025 2:39pm



NOTE: BARRICADES AND THEIR PLACEMENT SHALL MEET THE REQUIREMENTS OF FAA AC 150/5370-2G OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.

A
GC-501

LOW PROFILE BARRICADE - TYPE 1 (TWO FLASHING RED LIGHTS)

N.T.S.



NOTE: BARRICADES AND THEIR PLACEMENT SHALL MEET THE REQUIREMENTS OF FAA AC 150/5370-2G OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.

B
GC-501

VERTICAL PANEL BARRICADE (FLASHING RED LIGHT)

N.T.S.



SHEET OVERVIEW TITLE	CONSTRUCTION PHASING DETAILS	SHEET REFERENCE NUMBER: EXHIBIT SHEET 10 OF 10	DESIGNED BY: G. SHAW DRAWN BY: A. SANTILLI CHECKED BY: C. JHAVERI DATE: 08/29/2025 DWG SCALE: AS SHOWN	PHX <i>WVT BYR</i> CITY OF PHOENIX AVIATION DEPARTMENT GOODYEAR AIRPORT INFIELD PAVING PHASE II AV 41000079 ADOT ADOT GRANT NO.: E3S21 01C & E4SSM 01C	PRIME CONSULTANT TRACE CONSULTING 1871 E. Jefferson St. Suite 3 Phoenix, AZ 85034	SUB CONSULTANT
CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28. THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX.				EXHIBIT		
				NO		
				REVISIONS / SUBMISSIONS		
				DATE		