

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



PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

**HAPPY VALLEY ROAD: 67TH AVENUE TO 35TH AVENUE
ROADWAY IMPROVEMENTS
PROJECT NO. ST85100437
FEDERAL AID NO. PHX-0(363)D
ADOT TRACS NO. T0239 01C**

**PROCUREPHX PRODUCT CATEGORY CODE 912000000
RFx 6000001675**

AGREEMENT _____



TABLE OF CONTENTS

CITY OF PHOENIX PROJECT TITLE: HAPPY VALLEY ROAD: 67TH AVENUE TO 35TH AVENUE ROADWAY IMPROVEMENTS

CITY OF PHOENIX PROJECT NO.: ST85100437

FEDERAL AID NO.: PHX-0(363)D

ADOT TRACS NO.: MA-PHX-T0239 01C

SECTION I – Informative

	<u>Page</u>
(1) Call for Bids	C.F.B. - 1 to 2
(2) Information for Bidders	I.F.B. - 1 to 15
(3) Supplementary Conditions	S.C. - 1 to 21
(4) 2023 City of Phoenix Supplement to MAG Specifications (Polymer Modified Asphalt)	7 Pages
(5) Special Provisions	S.P. - 1 to 78
(6) Environmental Clearance Letter	E.C.L. – 1 to 2
(7) Desert Tortoise / Burrowing Owl / Migratory Birds / Cliff Swallow	4 Pages
(8) EPRISE LPA Sub-Recipient With Goal	EPRISE – 1 to 29
(9) ADOT Contractor Compliance Agreement Assurances	9 Pages
(10) Equal Employment Opportunity Compliance Report	1 Page
(11) ADOT Good Faith Effort Guide	24 Pages
(12) ADOT Title VI Assurances	9 Pages
(13) LPA Prompt Pay and Payment Reporting Provisions	5 Pages
(14) Federal Provisions	F.R. – 1 to 32
(15) Title 29, Parts 3 & 5 of The Code of Federal Regulations	C.F.R. – 1 to 31
(16) General Wage Decision	G.W.D. – 1 to 9
(17) Storm Water Pollution Prevention Plan	S.W.P.P.P. -1 to 12
(18) APS Street Light Pole J-Box Detail	A.P.S. -1
(19) Soils Report and Materials Log	92 Pages

SECTION II - Submittals

(1) Bid Proposal	P. - 1 to 10
(2) Proposal Submittal	P.S. – 1
(3) Surety Bond	S.B. – 1
(4) ADOT DBE Assurance	Form 3102C
(5) ADOT Online Bidder's List	1 Page
(6) ADOT DBE Intended Participation Affidavit: Individual	Form 3105C
(7) ADOT DBE Intended Participation Affidavit: Summary for Prime	Form 3106C
(8) Certification with Regard to Equal Opportunity Clause	E.O.C. - 1
(9) List of Major Subcontractors and Suppliers	L.O.S. – 1
(10) List of All Subcontractors and Suppliers	L.O.S. – 2
(11) Bidder's Disclosure Statement	B.D.S. – 1 to 4
(12) Affidavit of Identity	A.O.I. – 1



(13) Buy America Certificate

B.A.C. – 1

(14) Non-Collusion Affidavit

N.C.A. – 1

SECTION III – Technical Specifications and Drawings

Pages/Sheets

(1) Plan Sheets

368 Pages

CALL FOR BIDS

**CITY OF PHOENIX
HAPPY VALLEY ROAD: 67TH AVENUE TO 35TH AVENUE
ROADWAY IMPROVEMENTS
DESIGN-BID-BUILD**

**PROJECT NO. ST85100437
FEDERAL AID NO. PHX-0(363)D
ADOT TRACS NO. T0239 01C**

**PROCUREPHX PRODUCT CATEGORY CODE 912000000
RFx 6000001675**

**BIDS WILL BE DUE: TUESDAY, OCTOBER 29, 2024, AT 2:00 P.M.
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 29, 2024, AT 2:00 P.M.
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.

Happy Valley Road will be upgraded to include three through lanes and one buffered bike lane in each direction with raised median islands. The proposed improvements include roadway widening, installation of Americans with Disability Act sidewalk and curb ramps, scenic trails, raised medians, new bus bays, pads and stops, drainage improvements, new street lighting, upgrading traffic signals, mill and overlay, new striping and signage, and landscaping.

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.

A Disadvantaged Business Enterprise goal of 12.6 percent 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 on Tuesday October 15, 2024, at 10:00 a.m., at 1034 E. Madison Street, Phoenix, AZ 85034, Gecko Conference Room. 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.

REQUEST FOR BID PACKET

On Thursday, October 3, 2024, the bid packet may be downloaded from the City of Phoenix's eProcurement site at:

<https://solicitations.phoenix.gov>

or

<https://eprocurement.phoenix.gov/irj/portal>

the City of Phoenix's "Solicitations" web page as. The web address is:

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 eProcurement <https://www.phoenix.gov/finance/vendorsreg> 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 Kathleen Kennedy at (602) 534-5789 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 directed to Kathleen Kennedy at (602) 534-5789 or kathleen.kennedy@phoenix.gov.

Jeffrey Barton
City Manager

Eric J. Froberg, PE
City Engineer

Published: Arizona Business Gazette
Date: October 3, 2024
Date: October 10, 2024
District: 1

INFORMATION FOR BIDDERS

1. **102 BIDDING REQUIREMENTS AND CONDITIONS**, Add the following to **MAG and COP Supplement to MAG Section 102 BIDDING REQUIREMENTS AND CONDITIONS**:

INFORMATION FOR BIDDERS

A. **QUESTIONS ON PLANS AND SPECIFICATIONS**

Neither the Engineer nor the City of Phoenix shall 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://solicitations.phoenix.gov>

OR

<https://eprocurement.phoenix.gov/irj/portal>

For additional information prior to submitting your bid, contact:

Plans, Technical/Special Provisions, Proposal or Specifications:

NAME: Kathleen Kennedy, Design and Construction Procurement

ADDRESS: 200 W. Washington Street, 5th Floor, Phoenix, AZ 85003-1611

PHONE: (602) 534-5789 E-MAIL: kathleen.kennedy@phoenix.gov.

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.

B. **REQUEST FOR SUBSTITUTIONS**

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

1. 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)
2. The prime bidder, at his own expense, shall 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.
3. 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.
4. The request will be submitted to Design and Construction Procurement, Attention Kathleen Kennedy, 5th floor, Phoenix City Hall, 200 W. Washington Street, Phoenix, Arizona 85003-1611 or via email to Kathleen.kennedy@phoenix.gov.

C. **BID BOND**

Bidders must submit a properly completed proposal guarantee in the form of certified check, cashier's check, or surety bond on the form provided, for an amount not less than ten percent of the total amount bid 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 shall 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 shall 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 shall 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.***

D. **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 4:00 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).

E. **BID SUBMITTAL**

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

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

For: HAPPY VALLEY ROAD: 67TH AVENUE TO 35TH AVENUE ROADWAY IMPROVEMENTS

City of Phoenix Project Number: ST85100437

Federal Aid Project Number: PHX-0(363)D

ADOT TRACS Number: T0239 O1C

Sealed bids will be submitted to the bid box located on the first floor of the Phoenix City Hall Building, 200 W. Washington Street, Phoenix, Arizona, 85003 prior to the time and date specified for bid opening.

F. **BID WITHDRAWALS**

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

“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 190.2. Proposals, read or unread, will not be returned to the bidders until after determination of award has been made.

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

It shall 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 shall be acknowledged by the bidder on Page P-1. All addenda (if any) will be available online within each project’s folder at the following website:

<https://solicitations.phoenix.gov>

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 Design and Construction Procurement website to ascertain if any addenda have been issued for the project.

H. **BID SUBMITTAL CHECKLIST**

All firms must be registered in the City’s Vendor Management System prior to submitting a bid. 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)

- Completed all of the Bid Proposal forms? (Pages P-1 to P-10 and P.S.-1)
- Included your Bid Bond (rated A- or better for the prior four quarters) or Guarantee Cashier's Check? (Page S.B.-1)
- Completed ADOT DBE Assurance Form 3102C
- Completed Certification with Regard to Equal Opportunity Clause for Contractor and Subcontractors (E.O.C.-1)
- Completed List of Major Subcontractors and Suppliers form (Page L.O.S.-1)
- Buy American Certificate (Page B.A.C.-1)
- No Collusion Affidavit (Page N.C.A.-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, 5th Floor, or can be sent by email to kathleen.kennedy@phoenix.gov.

- **All Bidders** - ADOT Online Bidder's List confirmation email from ADOT
- **All Bidders** – ADOT DBE Intended Participation Affidavit: Individual Form 3105C
- **All Bidders** – ADOT DBE Intended Participation Affidavit Summary for Prime Form 3106C
- Completed List of All Subcontractors and Suppliers form (L.O.S.-2)
- Bidders Disclosure Statement (Pages B.D.S.-1 to 4)
- Submit Affidavit of Identity (if you are a sole proprietor) (Page A.O.I.-1)

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.

***ALL DOCUMENTS NOTED AS REQUIRED IN SUBCONTRACTS MUST BE INCLUDED IN EVERY SUBCONTRACT THAT IS UPLOADED INTO THE B2G SYSTEM.**

I. 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.

J. **WAGE DETERMINATION**

In the event that the 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 10 days prior to bid opening, the most recent applicable wage decision shall 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.

K. **WORKFORCE REPORTING REQUIREMENTS**

The contractor shall 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" website to track the certified payroll information. Additional information regarding the use of this system is available at <https://lcptracker.net>. This requirement shall also apply to every lower-tier subcontractor that is required to provide weekly certified payroll reports.

L. **PAYMENT WITHHOLDING**

Payrolls, including subcontractor's payrolls, must be submitted weekly no later than seven 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 with 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 affect the complete or timely release of payments.

M. **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 shall schedule the conference by calling the Labor Compliance Office, (602) 261-8287. Minimum attendance shall 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.

N. **DBE PARTICIPATION**

See EPRISE LPA Sub-Recipient with Goal and ADOT Contractor Compliance Agreement Assurances sections.

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

It is the responsibility of the bidder to determine whether it has the appropriate contracting licenses to perform the work. The City will make the award, if any, to the lowest responsive, responsible bidder who has the proper licenses. For all projects except Federal-aid funded projects, the bidder must have the proper licenses at the time the bid is submitted to the City. On Federal-aid funded projects, the bidder is not required to have the licenses at the time of bidding, but it must procure the licenses before award can be made, and no later than 60 days after the date bids are opened. Licensing information is available from the Arizona Registrar of Contractors.

Prior to award of the contract, the successful bidder must provide Design and Construction Procurement its Contractor's License Classification and number, its City of Phoenix Privilege License number and Federal Tax Identification number.

Bidder shall submit the Bidder's Disclosure Statement as set forth in Pages B.D.S. - 1 to B.D.S. - 4 within five calendar days of bid opening by 5:00 p.m. Bidder will be deemed non-responsive and the bid rejected if Bidder fails to submit a substantially completed Bidder's Disclosure Statement as specified above.

P. **TAX LIABILITIES; DISCLOSURE OF CONVICTIONS AND BREACH(ES) OF CONTRACT**

On or before the award of the contract for this project, the successful bidder shall: (i) file all applicable tax returns and shall 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 shall 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.

Q. STANDARD SPECIFICATIONS AND DETAILS

Except as otherwise required in these specifications, bid preparation and construction of this project shall be in accordance with all applicable Maricopa Association of Governments' (MAG) Uniform Standard Specifications and Uniform Standard Details, latest edition, the City of Phoenix Supplements to the MAG Uniform Standard Specifications and Details, latest edition, the City of Phoenix Traffic Signal Standard Specifications, latest edition, and the Arizona Department of Transportation (ADOT) Standard Specifications for Road and Bridge Construction, latest edition.

R. 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 edition
6. City of Phoenix Traffic Signal Standard Specifications
7. MAG Standard Specifications and Details, latest edition
8. ADOT Standard Specifications for Roads and Bridges Construction, latest edition

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

S. 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."

T. 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 shall 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 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 shall include a similar provision in all of its Agreements with subcontractors and suppliers providing services or supplying materials under the Contract Documents to ensure that the City, its authorized representative, and/or the appropriate federal agency has access to the Subcontractor's and Supplier's records to verify the accuracy of all cost and pricing data.

The City reserves the right to decrease the 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 the Subcontractor's and Supplier's 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 Contract, the audit discloses the Contractor has provided false, misleading or inaccurate cost and pricing data, and the cost discrepancies exceed 1% of the total Contract billings, the Contractor shall be liable for reimbursement of the reasonable, actual cost of the audit.

U. 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 it. Contractor agrees to comply with these Federal Laws in performing under this

Agreement and to permit City inspection of its personnel records to verify such compliance.

V. **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:

1. 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.
2. A breach of a warranty under paragraph 1 shall be deemed a material breach of the contract that is subject to penalties up to and including termination of the contract.
3. 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 1.

W. **CONTRACTOR AND SUBCONTRACTOR WORKER BACKGROUND SCREENING**

Contractor agrees that all Contractor's and subcontractors' workers (collectively "Contract Worker(s)") pursuant to this Agreement will be subject to background and security checks and screening (collectively "Background Screening") at Contractor's sole cost and expense, unless otherwise provided for in the scope of work. Contractor's background screening will comply with all applicable laws, rules and regulations. Contractor further agrees that the background screening is necessary to preserve and protect the public health, safety and welfare. The City requires a completed Contract Worker Badge/Key/Intrusion Detection Responsibilities Agreement for each Contract Worker who requires a badge or key.

Background Screening Risk Level: The City has established two levels of risk: Standard and Maximum risk. The current risk level and background screening required is **N/A**. If the scope of work changes, the City may amend the level of risk, which could require the Contractor to incur additional contract costs to obtain background screens or badges.

Terms of This Section Applicable to all Contractor's Contracts and Subcontracts: Contractor will include Contract Worker background screening in all contracts and subcontracts for services furnished under this agreement.

Materiality of Background Screening Requirements; Indemnity: The background screening requirements are material to City's entry into this agreement and any breach of these provisions will be deemed a material breach of this contract. In addition to the indemnity provisions set forth in this agreement, Contractor will defend, indemnify and hold harmless the City for all claims arising out of this background screening section including, but not limited to, the disqualifications of a Contract Worker by Contractor. The background screening requirements are the minimum requirements for the Agreement. The City in no way warrants that these minimum requirements are sufficient to protect Contractor from any liabilities that may arise out of the Contractor's services under this Agreement or Contractor's failure to comply with this section. Therefore, Contractor and its Contract Workers will take any reasonable, prudent and necessary measures to preserve and protect public health, safety and welfare when providing services under this Agreement.

Continuing Duty; Audit: Contractor's obligations and requirements will continue throughout the entire term of this Agreement. Contractor will maintain all records and documents related to all background screenings and the City reserves the right to audit Contractor's records.

X. **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.

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

If practical, the contractor shall 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.

Z. **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 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 Contractor 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 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 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 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 shall 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 shall 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 shall 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.

AA. **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, shall comply with Phoenix City Code Chapter 2, Section 188.”

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

1. 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;
2. 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
3. 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 shall first notify the City as set forth in this section of the request or demand for the data. The Contractor or its subcontractors shall 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 shall promptly deliver, as set forth in this section, a copy of all data to the City. All data shall 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 shall be deemed to cause irreparable harm that justifies injunctive relief in court. Contractor agrees that the requirements of this Section shall 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 shall 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 shall be incorporated into all subcontracts entered into by Contractor. It is further agreed that a violation of this Section shall 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 shall survive the termination of this Contract.

CC. PROJECT MANAGEMENT INFORMATION SYSTEM (UNIFIER)

The Street Transportation Department's Design and Construction Management (DCM) Project Manager may determine that use of UNIFIER will be required during this contract. The following information provides a guideline for utilization. Any questions related to the requirements of UNIFIER should be directed to the DCM Project Manager.

1. 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.
2. The contractor can expect to use this ASP to process all primary level tri-partite contract documents related to the design or construction phase of the Project including but not limited to: requests for interpretation/information, potential Change Orders, construction meeting minutes, Submittals, Design Professional's supplemental instructions, and Payment Requests.
3. The contractor will be required to process information into electronic digital form. In order to fulfill this requirement, the contractor shall provide all necessary equipment to perform the functions necessary to generate, convert, store, maintain, connect to web-based ASP and transfer electronic data.

4. The contractor shall provide a computerized networked office platform with broadband internet connectivity. Wired or wireless is acceptable. This platform shall function well in a web-based environment utilizing an internet browser compatible with the City UNIFIER ASP system.

UNIFIER training will be provided through the City of Phoenix. Contact information will be provided to the firms under contract, to establish the set up with a log-in and password.

DD. CONTRACTOR AND SUBCONTRACTOR RECORDS

The contractor, subcontractors and all suppliers shall keep and maintain all books, papers, records, files, accounts, reports, bid documents with backup data, including electronic data, and all other material relating to the contract and project for five years following completion and acceptance of the work.

All the above material shall be made available to the City for auditing, inspection and copying and shall be produced, upon request.

The contractor shall insert the above requirement in each subcontract, purchase order and lease agreement and shall also include in all subcontracts a clause requiring subcontractors to include the above requirement in any lower-tier subcontract, purchase order or lease agreement.

EE. FEDERAL IMMIGRATION AND NATIONALITY ACT

The contractor, including all subcontractors, shall comply with all federal, state and local immigration laws and regulations, as set forth in Arizona Executive Order 2005-30, relating to the immigration status of their employees who perform services on the contract during the duration of the contract. The Agency shall retain the right to perform random audits of contractor and subcontractor records or to inspect papers of any employee thereof to ensure compliance.

By submission of a bid, the contractor warrants that the contractor and all proposed subcontractors are and shall remain in compliance with all federal, state and local immigration laws and regulations relating to the immigration status of their employees who perform services on the contract. The Agency may, at its sole discretion, require evidence of compliance from the contractor or subcontractor. Should the Agency request evidence of compliance, the contractor or subcontractor shall have ten working days from receipt of the request to supply adequate information. The City will accept, as evidence of compliance, a showing by the contractor or subcontractor that it has followed the employment verification provisions of the Federal Immigration and Nationality Act as set forth in Sections 274A and 274B of that Act, including implementation of regulations and agreements between the Department of Homeland Security and the Social Security Administration's verification service. The contractor shall include the requirements of the provisions of ADOT Standard Specifications Subsection 107.19 in all its subcontracts.

Failure to comply with the immigration laws or to submit proof of compliance constitutes a material breach of contract. The City will reduce the contractor's compensation by \$10,000 for the initial instance of non-compliance by the contractor or a subcontractor. Should the same contractor or subcontractor commit subsequent violations within a two-year time-period from the initial violation, the contractor's compensation will be reduced by \$50,000 for each violation. The third instance by the same contractor or subcontractor within a two-year period may result, in addition to the \$50,000 reduction in compensation, in removal of the offending contractor or subcontractor, suspension of work in whole or in part or, in the case of a third violation by the contractor, termination of the contract for default. In addition, the City may debar a contractor or subcontractor who has committed three violations within a two-year

period for up to one year. For purposes of this paragraph, a violation by a subcontractor does not count as a violation by the contractor.

Any delay resulting from a sanction under this subsection is a non-excusable delay. The contractor is not entitled to any compensation or extension of time for any delays or additional costs resulting from a sanction under this subsection.

FF. **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.

GG. **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.

HH. **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.

II. **COMPLIANCE WITH LAWS**

Contractor must comply with all existing and subsequently enacted federal, state and local laws, ordinances and codes, all applicable ADA requirements, regulations that are, or become applicable to this Agreement, and be in general conformance with PROWAG guidance. 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.

JJ. 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.

SUPPLEMENTARY CONDITIONS

1. **103 AWARD AND EXECUTION OF CONTRACT,** Add the following to **Subsection 103.3 AWARD OF CONTRACT:**

Contract award will be made to a responsive and responsible bidder based on the low total base bid or on the low combination of the total base bid and any selected alternate(s), whichever is in the best interest of the City. If unit pricing is required in the proposal, the extensions and additions will be verified to ensure correctness. Award will be based on the revised total if any errors are found. Additionally, the Contractor shall meet the minimum DBE subcontracting goal set for this contract or have been granted a full or partial waiver of the goal. 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.

2. **103 AWARD AND EXECUTION OF CONTRACT,** Add the following to **Subsection 103.3 AWARD OF CONTRACT**

EARLY PROCUREMENT OF LONG LEAD MATERIALS

Within 30 days of contract execution and prior to scheduling of a Pre-construction conference meeting, the Contractor may request early procurement of long lead materials. The Contractor's request shall be accompanied by comprehensive justification documents for review; this will include but is not limited to letters from material manufacturers or suppliers, and a project schedule showing the impact and incorporation of long lead items into the project to support the early procurement request. The request shall also outline the expected commencement of construction. The Engineer will evaluate the Contractor's early procurement request and practicable start of construction. Upon review of the request, the Engineer may issue a Notice of Intent or Limited Notice to Proceed based on the agreed upon date in the schedule. After approval of applicable material submittals, the Contractor can then choose to proceed and order long lead item materials. Failure to submit this request after execution of the contract may result in denying requests for additional time for procurement or supply chain concerns. No additional compensation or adjustment in unit prices will be considered as a result of the Contractor's request.

3. **103 AWARD AND EXECUTION OF CONTRACT,** Add the following to **Subsection 103.5, REQUIREMENT OF CONTRACT BONDS:**

1. PERFORMANCE BOND AND LABOR AND MATERIAL BOND

Prior to the execution of a contract, the successful bidder must provide a performance bond and a labor and material bond, each in an amount equal to the full amount of the contract. Each such bond shall 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 Department of Insurance. A copy of the Certificate of Authority shall accompany the bonds. The Certificate shall have been issued or updated within two years prior to the execution of the Contract. The bonds shall be made payable and acceptable to the City of Phoenix. The bonds shall 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 required by law, and the bonds shall have attached thereto a certified copy of Power of Attorney of the signing official. If one Power of Attorney is submitted, it shall be for twice the total contract amount. If two Powers of Attorney are submitted, each shall 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.

2. BONDING COMPANIES

All bonds submitted for this project shall be provided by a company which has been rated "A- or better for the prior four quarters" by the A. M. Best Company. **Failure to provide an "A- or better for the prior four quarters" bond will result in bid rejection.**

4. **103 AWARD AND EXECUTION OF CONTRACT, Delete Subsection 103.6, CONTRACTOR'S INSURANCE** in its entirety and substitute the following:

103.6.1 General:

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 subconsultants. Contractor and subcontractors must maintain that insurance until all 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.

1. 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:

1. **Commercial General Liability – Occurrence Form**

Policy must include bodily injury, property damage, broad form contractual liability and XCU coverage.

General Aggregate	\$3,000,000
Products – Completed Operations Aggregate	\$1,000,000
Personal and Advertising Injury	\$1,000,000
Each Occurrence	\$1,000,000

a. 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.

b. Coverage must include XCU coverage.

c. There shall 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.

d. City of Phoenix is an additional insured to the full limits of liability purchased by the Contractor.

e. The Contractor's insurance coverage must be primary and non-contributory with respect to any insurance or self-insurance carried by the City.

f. Contractor's policies must be endorsed to provide an extension of the completed operations coverage for a period of nine years.

2. Automobile Liability

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

Combined Single Limit (CSL)	\$1,000,000
-----------------------------	-------------

a. 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.

b. City of Phoenix is an additional insured to the full limits of liability purchased by the Contractor.

c. The Contractor's insurance coverage must be primary and non-contributory with respect to any insurance or self-insurance carried by the City.

3. 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

a. Policy must contain a waiver of subrogation against the City of Phoenix.

b. 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 executed the appropriate sole proprietor waiver form.

4. No Builders' Risk Insurance required.

2. NOTICE OF CANCELTION

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 Design and Construction Procurement, 200 W. Washington Street, 5th Floor, by certified mail, return receipt requested.

3. 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 required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

4. 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 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.**

5. SUBCONTRACTORS

Contractor's certificates shall include all subcontractors as additional insureds under its policies **OR** Contractor shall 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.

6. APPROVAL

Any modification or variation from the insurance coverages and conditions in this Contract must be documented by an executed contract amendment.

103.6.2 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.

5. **104 SCOPE OF WORK**, Add the following to **Section 104.1 WORK TO BE DONE**:

The following environmental commitment measures are required to be followed. Refer to Environmental Clearance Letter section for additional information and guidance.

The project mitigation measures are not subject to change without written approval from ADOT Environmental Planning. The Contractor shall follow all the requirements of the permits specified herein and comply with the project special provisions, as well as the MAG Uniform Standard Specifications for Public Works, as well as all applicable local environmental requirements.

II. Project Mitigation Measures:

City of Phoenix Responsibilities:

- Protected native plants within the project limits will be impacted by this project; therefore, the City of Phoenix Project Manager will contact the Office of the City Engineer Environmental Services Section to determine if Arizona Department of Agriculture notification is needed. If notification is needed, the City of Phoenix Project Manager will send the notification at least thirty (30) calendar days prior to the start of construction.
- The attached Migratory Bird Treaty Act, Western burrowing owl, and Sonoran Desert tortoise flyers will be incorporated into the bid documents and provided to the contractor, subcontractors, and all field personnel at the preconstruction meeting or prior to the start of work. The City of Phoenix Project Manager will ensure the contractor posts the Migratory Bird Treaty Act flyer at the construction site at all times during construction.
- The City of Phoenix Street Transportation Department, in coordination with the contractor, will contact the Office of the City Engineer Environmental Services Section to arrange a survey for active bird nests at least 2 weeks prior to the start of any work that will impact vegetation between February 1 and August 31 of any calendar year.
- The City of Phoenix Street Transportation Department will ensure the contractor ceases work within 30 feet of an active bird nest. The Office of the City Engineer Environmental Services Section shall be immediately notified and allowed time to conduct necessary compliance work and make appropriate arrangements.

Contractor Responsibilities:

- Protected native plants within the project limits will be impacted by this project; therefore, the contractor, in coordination with the City of Phoenix Project Manager, shall contact the Office of the City Engineer Environmental Services Section to determine if Arizona Department of Agriculture notification is needed. If notification is needed, the contractor, in coordination with the City of Phoenix Project Manager, shall send the notification at least thirty (30) calendar days prior to the start of construction.

- The contractor shall provide the attached Migratory Bird Treaty Act, Western burrowing owl, and Sonoran desert tortoise flyers to all field personnel prior to the start of work and shall post the flyers at the construction site at all times during construction.
- The contractor, in coordination with the City of Phoenix Street Transportation Department, shall contact the Office of the City Engineer Environmental Services Section to arrange a survey for active bird nests at least 2 weeks prior to the start of any work that will impact vegetation between February 1 and August 31 of any calendar year.
- The contractor shall cease work within 30 feet of an active bird nest. The Office of the City Engineer Environmental Services Section shall be immediately notified and allowed time to conduct necessary compliance work and make appropriate arrangements.
- To prevent the introduction of invasive species seeds, all earthmoving and hauling equipment shall be washed prior to entering the construction site and the contractor shall inspect all construction equipment and remove all attached debris, including plant parts, soil and mud, prior to the equipment entering the construction site.
- To prevent invasive species seeds from leaving the site, the contractor shall inspect all construction and hauling equipment and remove all debris, including plant parts, soil and mud, prior to leaving the construction site.
- For milling activities, the roadway surface preceding the milling machine shall be kept sufficiently wet so as to prevent the generation of any visible fugitive dust particles, but not so wet as to cause excess runoff from the roadway surface onto the roadway shoulder.

Guidelines:

- City of Phoenix Street Transportation Department Migratory Bird Treaty Act awareness flyer
- City of Phoenix Street Transportation Department Western burrowing owl awareness flyer
- City of Phoenix Street Transportation Department Sonoran Desert tortoise awareness flyer

6. **104 SCOPE OF WORK,** Add the following to **Subsection 104.1.2 MAINTENANCE OF TRAFFIC:**

ADA AND ANSI ACCESS OF PREMISES DURING CONSTRUCTION

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

7. **104 SCOPE OF WORK,** Add the following to **Subsection 104.1.4 CLEANUP AND DUST CONTROL:**

The Contractor shall 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.

8. **105 CONTROL OF WORK,** Add the following to **Subsection 105.1, AUTHORITY OF THE ENGINEER:**

1. CONTRACT ADMINISTRATION

The definition of "Engineer" shall read as follows:

"Engineer": All references to "Engineer" in these contract bid documents, including the MAG Specifications, shall mean City Engineer.

2. PRECONSTRUCTION CONFERENCE

After completion of the contract documents, to include bonds, insurance and signatures and prior to the commencement of any work on the project, the Street Transportation Department, DCM Division, (telephone 602-495-2050), will schedule a Pre-Construction Conference. This will be held at 1034 East Madison Street, Phoenix, Arizona.

Construction administration will be provided by City of Phoenix, Street Transportation Department, Design and Construction Management DCM Division.

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. The Contractor shall also provide copies of all purchase orders and/or contracts with DBE subcontractors and suppliers used to meet the subcontract goal programmed for this project.

Minimum attendance by the Contractor shall 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.

3. AUTHORIZATION OF THE ENGINEER

The City may, at its discretion and without cause, order the Contractor in writing to stop and suspend work. Immediately after receiving such notice, the Contractor shall discontinue advancing the work specified under this Agreement.

Such suspension shall 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 the cost or time to perform the work has been adversely impacted by any suspension or stoppage of work by the City.

9. **105 CONTROL OF WORK,** Add the following to **Subsection 105.2 PLANS AND SHOP DRAWINGS:**

The Contractor shall submit as many of the required shop drawings and product data submittals at the Pre-Construction meeting as practical and possible. All shop drawings and product data submittals shall be submitted sufficiently in advance to allow adequate time for City review(s) and approval. The Contractor shall submit early enough to allow enough time for reviews based on the assumption that a submittal may be marked "Revise and Resubmit" or "Rejected", requiring the Contractor to modify the submittal and resubmit for additional review(s) until acceptance.

A separate transmittal shall be used for each specific item type, class of material or equipment for which a submittal is required. Multiple items under one transmittal will only be allowed when the items taken together constitute a complete manufacturer's package, or are so functionally related that the entire package should be reviewed as a whole. The contractor shall submit six (6) hard copies of each shop drawing for review. **Email or FAX submittals will not be accepted.**

The Contractor shall allow up to four (4) weeks for City review for each submittal. Some submittals may be simple and straightforward and may not require the full four (4) weeks, but other more complex submittals may take the full four (4) weeks.

10. **105 CONTROL OF WORK**, Add the following to **Subsection 105.7 COOPERATION BETWEEN CONTRACTORS**

Other Contractors are expected to be working in or near the area of this contract. The Contractor shall conduct his work as specified in MAG Section 105.7.

11. **105 CONTROL OF WORK**, Delete **Subsection 105.8 CONSTRUCTION STAKES, LINES AND GRADES** and substitute the following

Description

The work under this section shall consist of furnishing all materials, personnel, and equipment necessary to perform all surveying, staking and verification of the accuracy of all points which have been provided by the Engineer in the project plans.

Included in this work will be all calculations required for the satisfactory completion of the project in conformance with the plans and specifications. The work will be done under the direction of a registered professional surveyor employed by the Contractor.

Measurements of all removals and pay quantity items will be the responsibility of the Engineer.

When utility adjustments are a part of the contract, the Contractor will perform and be responsible for locating, tying and untying all manholes and valves that are discovered during the course of the contract. The Contractor will set all survey points, stakes and references necessary for carrying out all such adjustments.

During installation and/or relocation of new water lines, valves, water meters and service connections, fire hydrants, sewer lines, sewer taps, clean outs, manholes, and other similar assets, the Contractor will record the final as-built location and provide additional information related to cost, manufacturer, and model numbers in a form provided by the Engineer.

The Contractor will furnish all traffic control, including flagging for survey and staking operations. Traffic control will be in accordance with the requirements of the City of Phoenix Barricade Manual.

The Contractor will keep field notes in bound field books. These books will be available for inspection by City personnel at all times and will become the property of the City of Phoenix upon completion of the project.

Construction Staking Requirements

Staking will be performed in accordance with the City of Phoenix's Survey Section Standard Requirements for Staking, As BUILTS and Quantity Calculations, plus any special addenda provided by the Engineer. The Contractor will provide to the Engineer in writing, for the Engineer's approval, any special procedures that will be used for construction survey staking completion.

The project plans will include all the required benchmark and horizontal datum information to

establish survey control on the project site and to complete the proper layout of the work. The project plans will identify a minimum of two City of Phoenix published Benchmarks, and identify additional temporary benchmarks at other convenient locations when applicable. After the Contractor has verified the accuracy of the control points established by the City, the Contractor will set all stakes necessary for construction in accordance with the City of Phoenix Survey Section Standard Requirements.

If errors are discovered during the verification process and the control points do not agree with the horizontal or vertical information shown in the plans, the Contractor shall promptly notify the Engineer in writing, and explain the problem in detail. The Engineer will advise the Contractor of any corrective actions which may be necessary.

The Contractor will exercise care in the preservation of stakes, references, benchmarks and will reset them when they are damaged, lost, displaced, or removed.

Any discrepancies in grade, alignment, locations, or dimensions detected by the Contractor will be brought to the attention of the Engineer by letter. No changes in the project plans will be allowed without the approval of the Engineer.

The Engineer reserves the right to make inspections and random checks of any portion of the staking and layout procedure. If, in the Engineer's opinion, the work is not being performed in the manner that will assure proper control and accuracy, the Engineer will order any or all the staking and layout work redone at no additional cost.

If any portion of the Contractor's staking and layout work is ordered redone, resulting in additional rechecking by the Engineer, the City will be reimbursed for all costs for such additional checking. The amount of such costs will be deducted from the Contractor's progress payment.

Inspection of the Contractor's layout by the Engineer and the acceptance of all or any part of it will not relieve the Contractor of their responsibility to secure the proper dimensions, grades, and elevations for the work.

Record Drawings and As-builts

The Contractor shall maintain a record drawing (redlines) set of plans at the job site. These shall be kept legible and current and shall show all changes or work added in a contrasting, reproducible color. Two weeks prior to issuance of substantial completion, the Contractor shall submit, prior to final inspection, corrected redline drawings with all appropriate field changes clearly marked and labeled on the signed and approved plan sets. The Engineer shall be the sole judge as to the acceptability of the record drawing plans, before the information is incorporated into the final and accepted as-built set to be stored with the Central Records office.

Prior to final acceptance, the Contractor will provide a complete as-built set, sealed by a Registered Professional, showing all field modifications and final elevation, stations and offset of the completed improvements. For construction related to sewer, and water facilities, and other utilities, as-built information may be requested at the Engineer prior to completion of as-builts at no additional cost. The as-built plans shall be prepared in accordance with the requirements of this section and other applicable special provisions for this project. Additional As-built requirement can be found on the Streets Transportation Department Website, under the Community Reference Materials.

Measurement

Construction surveying and layout will be measured as a single complete unit of work. The cost of providing Record Drawing and As-builts will be included in this cost.

A contingency item, Two-person survey party will be measured by the hour to the nearest half (1/2)

hour. This item will only be measured for payment when the Engineer requires extra work beyond what is required to layout the construction of the approved plans. The Engineer will require field notes and invoice to validate the additional time.

Payment

Payment for construction surveying and layout will be by the lump sum and will be made as follows:

The item of two-person survey party is a contingent item and is established for the purpose of compensating the Contractor for additional staking and layout required as a result of extra work ordered by the Engineer. Payment will be made at the predetermined unit price shown on the bidding schedule for the survey party or parties used. The Engineer will be the sole judge as to whether the additional work will be performed by the Contractor. The amount per hour for a two-person survey party includes the cost of all work necessary to complete the extra work.

No payment will be made for the resetting of stakes, references, benchmarks and other survey control

12. 105 CONTROL OF WORK, Add the following to Subsection 105.15 ACCEPTANCE, paragraph (B) Final Acceptance:

1. 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 shall have thirty (30) days thereafter to complete punch list work, unless additional time is granted--in writing--by the Engineer. In no case shall 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.

2. 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 shall withhold from the Contractor's final payment, an amount equal to at least twice the estimated cost of the remaining work. The cost of this work completed by others will be deducted from the monies owed to the Contractor as part of the overall project.

Final Release of More Than Ninety (90) Percent of the Contract Funds: Prior to final payment and release of monies retained, 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.

13. **106 CONTROL OF MATERIALS:** Add the following new paragraphs:

106.17 Construction Materials:

A construction material, when used on a federal-aid construction project shall comply with the requirements of Build America, Buy America (BABA) Act specified in Title IX, Subtitle A, Part 1, Sections 70901 and 70911-70918 (Pub. L. No. 117-58 §§ 70901; §§ 70911-70918) of the Infrastructure Investment and Job Act (IIJA).

A “construction material” that is permanently incorporated on the project shall include an article, material, or supply that is or consists primarily of the following:

1. Non-ferrous metals
2. Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables)
3. Glass (including optic glass)
4. Fiber optic cable (including drop cable)
5. Optical fiber
6. Lumber
7. Engineered wood; or
8. Drywall

Items manufactured through a combination of either two or more materials listed above, or at least one of the materials listed above and a material not listed shall be considered as a manufactured product, rather than as a construction material.

Build America, Buy America provisions specified for manufactured products in Section 70912(6)(B) of the IIJA, do not apply to federal-aid construction projects per FHWA’s existing statutory requirement applicable to manufactured products. A “manufactured product” is considered to be an item that undergoes one or more manufacturing processes before the item can be used on a federal-aid construction project.

Construction materials shall not include cement and cementitious materials; bituminous materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

All construction materials shall be produced in the United States. This means, all manufacturing processes to produce the construction materials shall occur in the United States. All manufacturing processes for construction materials shall mean the final manufacturing process and the immediately preceding manufacturing stage for the construction material.

The contractor shall furnish the Engineer with Certificates of Compliance, conforming to the requirements of Subsection 106.05 of the specifications, which shall state that the construction materials incorporated in the project meet the requirements specified herein. Certificates of Compliance shall also certify that all manufacturing processes to produce construction materials occurred in the United States.

Convict-produced materials are prohibited in accordance with the requirements of 23 CFR 635.417.

14. **107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC,** Add the following to **Subsection 107.1, LAWS TO BE OBSERVED, paragraph (C):**

While every effort has been made to Blue Stake all known utilities, and to research and show on the plans all existing underground utilities based on the best available information, it shall be the Contractor’s responsibility to locate and pothole all existing utilities sufficiently in advance of anticipated new underground construction to identify any potential conflicts and allow reasonable time for the Engineer to determine solutions. Any claims for additional compensation or work required due to the Contractor’s non-compliance with this provision shall not be considered for

payment by the City.

15. **107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC**, Add the following new paragraphs to **Subsection 107.1, LAWS TO BE OBSERVED**:

(A) FAIR TREATMENT OF WORKERS

The Contractor shall 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 shall 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 shall 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.

(B) DESERT TORTOISE MITIGATION

As stated in the Arizona Interagency Desert Tortoise Team (AIDTT) Management Plan (1996), if a desert tortoise is found in a project area, activities should be modified to avoid injuring or harming it. If activities cannot be modified, tortoises in harm's way should be moved in accordance with Arizona Game and Fish Department's "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects", revised October 23, 2007 (or the latest revision), included in these contract provisions. Taking, possession, or harassment of a desert tortoise is prohibited by State law, unless specifically authorized by Arizona Game and Fish Department.

(C) BURROWING OWLS MITIGATION – MIGRATORY BIRD TREATY ACT OF 1918

While no burrowing owls have been seen at the project site, small animal burrows likely used by rodents and cottontail rabbits are present. In the event that burrowing owls are found on the site, the project shall comply with the Migratory Bird Treaty Act of 1918 and relocate the birds prior to grading. A contact for relocation of burrowing owls is Bob Fox or Greg Clark of Wild at Heart, 31840 North 45th Street, Cave Creek, AZ 85331, 480-595-5047.

16. **107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC**, Add the following to **Subsection 107.2, PERMITS**:

1. **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 shall:

- A. Obtain approval of the proposed haul route, number of trucks, etc., by the Street Transportation Department, and then;
- B. Submit the proposed haul route plan to the Planning and Development Department and pay the appropriate plan-review fee (contact Planning and Development Department at 602-534-5933 for current plan review fee, the cost of which shall be considered incidental to the project), and after their approval;
- C. Obtain the written haul permit from the Planning and Development Department.

NOTE: 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.

2. **STORM WATER POLLUTION PREVENTION PLAN AND AZPDES PERMIT**

Any project that disturbs 1 acre or more of the ground surface requires the Contractor to obtain an AZPDES permit and prepare a SWPPP. This project does not require an AZPDES permit and SWPPP.

3. **DUST PERMIT**

Any project that disturbs more than 1/10 acre of soil requires an earthmoving permit from Maricopa County. Information and forms can be found at:

www.maricopa.gov/aq/divisions/permit_engineering/applications/Default.aspx

To facilitate and encourage strict compliance with the Maricopa County Air Pollution Control Regulations pertaining to fugitive dust control, the Contractor shall submit the following documentation to the Engineer at the Pre-Construction 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 the 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, the Contractor shall designate and identify to the City an individual who has completed the dust control training as required for the site Dust Control Coordinator. The Dust Control Coordinator shall 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 shall designate an individual who has completed Basic Training to be on site at all times that earth moving or dust generating activities are occurring.

The Contractor shall notify the Engineer 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 shall likewise be transmitted to the Engineer within twenty-four (24) hours.

The Contractor shall prevent any dust nuisance due to construction operations in accordance with MAG Specifications, Section 104.1.3, Cleanup and Dust Control. The Contractor shall 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 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. The Contractor shall remit payment of the reimbursable sum to the City within thirty (30) days of being presented with a demand for payment from the City.

4. **TEMPORARY RESTRICTION AND CLOSURE SYSTEM (TRACS) PERMIT**

The Contractor shall obtain a TRACS permit for any construction that restricts access (partial or complete closures) on Major/Collector public streets, or complete closures on Local streets, sidewalks, bike lanes and alleys. The Contractor shall obtain this permit in accordance with the City of Phoenix Traffic Barricade Manual, latest edition. The Contractor shall follow all requirements of the TRACS permit during construction. The Contractor shall obtain this permit before the Notice to Proceed date. Any construction delays caused by non-compliance with the TRACS permit or the City of Phoenix Traffic Barricade Manual requirements shall be the responsibility of the Contractor.

5. **DEMINIMUS DISCHARGE PERMIT**

As required, if the Contractor anticipates the discharge of any amount of water from the City water or wastewater system during construction, the Contractor shall be responsible for obtaining a DeMinimus Permit from the Arizona Department of Environmental Quality (ADEQ) for any discharge that will reach "waters of the U.S.", either directly or indirectly, and complying with all requirements of that permit. This includes all compliance reporting required by the permit. No separate payment will be made for obtaining or complying with this permit.

6. **U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT**

This project is subject to a U.S. Army Corps of Engineers 404 Permit (or U.S. Army Corps of Engineers Nationwide Permit (NWP)). The permit (or NWP) is included in these project specifications. The Contractor shall comply with all requirements of this permit.

7. **OTHER PERMITS**

The Contractor may be required to obtain other permits from other agencies, such as the Arizona Department of Transportation (ADOT) or the Flood Control District of Maricopa County (FCDMC) before beginning work or restricting traffic in their right-of-way. The Contractor will be required to obtain these permits and comply with their requirements.

17. **107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC**, Revise the title of **Subsection 107.4 ARCHAEOLOGICAL REPORTS** to **107.4 ARCHAEOLOGICAL MONITORING AND DISCOVERIES**, and add the following:

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. §17-107 - 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.

18. 107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC, Modify Subsection 107.8, USE OF EXPLOSIVES as follows:

Replace the words "Uniform Fire Code" with "Phoenix Fire Code".

19. 107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC, Add the following to Subsection 107.8, USE OF EXPLOSIVES:

NO BLASTING will be allowed on this project due to the close proximity multiple critical utilities, as well as many businesses and residences in the area.

20. 107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC, Add the following to Subsection 107.11, CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES:

1. 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"), 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 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 damages resulting from location of utility facilities.

The Contractor shall 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 (2) working days prior to commencing any excavation, the Contractor shall 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

2. 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 shall immediately notify, in writing, the Project Engineer of any potential utility-related delay claim.

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

The Contractor shall coordinate an investigation of the situation with the affected utility and the City's Utility Coordinator. 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 shall determine to document requirements of the affected utility for their acceptance of responsibility for the claims. The Contractor shall 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 shall obtain written confirmation from the utility company involved of their documentation requirements.

21. 108 COMMENCEMENT, PROSECUTION AND PROGRESS Add the following to Subsection 108.2, SUBLETTING OF CONTRACT:

(F) PROMPT PAYMENT

1. Contractor Payment to Subcontractor or Supplier

Contractor shall pay its subcontractors or suppliers within seven (7) calendar days of receipt of each progress payment from the City. The Contractor shall pay for the amount of work performed or materials supplied by each subcontractor or supplier as accepted and approved by the City with each progress payment. In addition, any reduction of retention by the City to the Contractor shall result in a corresponding reduction to subcontractors or suppliers who have performed satisfactory work. Contractor shall pay subcontractors or suppliers the reduced retention within fourteen (14) days of the payment of the reduction of the retention to the Contractor. No Contract between Contractor and its subcontractors and suppliers may materially alter the rights of any subcontractor or supplier to receive prompt payment and retention reduction as provided herein. If the Contractor fails to make payments in accordance with these provisions, the City may take any one or more of the following actions and Contractor agrees that the City may take such actions: (1) to hold the Contractor in default under this agreement; (2) withhold future payments including retention until proper payment has been made to subcontractors or suppliers in accordance with these provisions; (3) reject all future bids from the Contractor for a period not to exceed one year from

substantial completion date of this project; or (4) terminate agreement.

2. **Alternative Dispute Resolution Between Contractor and Subcontractor or Supplier**

If Contractor's payment to a subcontractor or supplier is in dispute, Contractor and subcontractor or supplier agree to submit the dispute to any one of the following dispute resolution processes within fourteen (14) calendar days from the date that any party involved gives written notice to the other party(ies): (1) binding arbitration; (2) a form of alternative dispute resolution (ADR) agreeable to all parties; or (3) a City of Phoenix facilitated mediation. When disputed claim is resolved through ADR or otherwise, the Contractor and subcontractor or supplier agree to implement the resolution within seven (7) calendar days from the resolution date.

3. **Inspection and Audit**

Contractor, its subcontractors and suppliers shall comply with A.R.S. 35-214 and the City shall have all rights and remedies to inspect and audit the records and files of Contractor, subcontractor or supplier, as afforded the State of Arizona in accordance with the provisions of A.R.S. Section 35-214.

4. **Non-Waiver**

Should the City fail or delay in exercising or enforcing any right, power, privilege, or remedy under this Section, such failure or delay shall not be deemed a waiver, release, or modification of the requirements of this Section or of any of the terms or provisions thereof.

5. **Inclusion of provisions in Subcontracts**

Contractor shall include these prompt payment provisions in every subcontract, including procurement of materials and leases of equipment for this Agreement.

6. **No Third Party Benefits or Rights**

Nothing contained in this Agreement is intended to benefit or confer any rights on any person or entity not a party to this Agreement, and no such person or entity, including but not limited to other Contractors, subcontractors or suppliers, may assert any claim, cause of action, or remedy against the City hereunder.

22. **108 COMMENCEMENT, PROSECUTION AND PROGRESS**, Add the following to **Subsection 108.4, CONTRACTOR'S CONSTRUCTION SCHEDULE**:

No later than one (1) week after the Pre-Construction meeting (or one week after the Notice to Proceed date is firmly established), the Contractor shall submit to the Engineer, two (2) copies of a detailed Critical Path Model (CPM) chart outlining the detailed progress of all major and critical elements of the project by weeks, from beginning of project to end. The chart shall begin at the established Notice to Proceed date and progress on a calendar basis, week by week, to the end of the project.

The Contractor shall submit updated CPM charts as required by the Engineer. This shall typically be on a monthly basis. The required submittals of updated CPM charts may be less frequent than monthly, if approved by the Engineer.

Neither the City nor the Engineer shall accept liability or responsibility for the reasonable or workable nature of the CPM schedules prepared and submitted by the Contractor—that responsibility shall remain with the Contractor.

23. **108 COMMENCEMENT, PROSECUTION AND PROGRESS**, Add the following to **Subsection 108.5, LIMITATION OF OPERATIONS:**

1. **WORK HOURS**

Regular working hours shall be defined as one 8-1/2 hour shift per day, Monday through Friday, exclusive of City holidays.

Work in excess of regular working hours shall be defined as overtime. For overtime which becomes necessary, the Contractor shall make a written request to the Engineer at least eight (8) calendar days before the desired overtime. The request shall include the duration, dates, times, reason for overtime, and a statement of the consequences if overtime is not approved.

The Contractor shall not schedule any overtime work which requires inspection, survey, or material testing without written permission from the Engineer two (2) working days before the proposed overtime work. The Engineer reserves the right to deny the requested overtime. If an overtime request is denied, the Engineer may extend the contract time at no additional cost to the City, including extended overhead costs.

Unscheduled Overtime

Overtime that is not requested and approved in accordance with the above procedure shall be defined as unscheduled overtime. All costs (including appropriate overhead) shall be paid by the Contractor by deduction from the contract.

Emergency Overtime

An emergency is defined as work required for a situation that is not within the Contractor's control.

With the Engineer's approval, the Contractor will be permitted to work overtime without being responsible for paying the City's costs.

2. **NIGHT WORK**

Any proposed night work will be done in accordance with all City of Phoenix Ordinances. Night work will only be allowed upon submittal and approval of After-Hours Work in the Right-of-Way application. The Contractor will submit a comprehensive plan at the Preconstruction Conference that details the steps and methods of noise reduction during night working hours. This plan will address, but not be limited to the following: back-up alarms, equipment noise, scheduling of excessively noisy construction phases, and material delivery times. Spotters, in lieu of back-up alarms, may be required at night.

There will be no separate measurement or payment for work related to this item, the cost being considered incidental to the cost of contract items.

24. **108 COMMENCEMENT, PROSECUTION AND PROGRESS**, Add the following to **Subsection 108.10, FORFEITURE AND DEFAULT OF CONTRACT:**

City's Right to Perform and Terminate for Convenience

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 the City, in addition to any other rights and remedies provided in the Contract Documents or by law, shall 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 the 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 shall not be entitled to receive any further payments under the Contract Documents until the Work shall 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 shall be obligated to pay the difference to City. Such costs and expense shall include not only the cost of completing the Work, but also losses, damages, costs and expense, including attorneys' fees and expenses, incurred by the City in connection with the re-procurement and defense of claims arising from Contractor's default.

If the City is found to have improperly terminated the Agreement for cause or default, the termination shall be converted to a termination for convenience in accordance with the provisions of this Agreement.

25. 108 COMMENCEMENT, PROSECUTION AND PROGRESS, Add the following to Subsection 108.11, TERMINATION OF CONTRACT:

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 shall be effective at the time and in the manner specified in the notification to the Contractor of the termination. Such termination shall be without prejudice to any claims which the Owner may have against the Contractor. In the event of a termination for convenience, the Contractor shall be paid only the direct value of its completed work and materials supplied as of the date of termination, and Contractor shall 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 shall be converted to a termination

for convenience in accordance with the provisions of this Agreement.

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.

26. **109 MEASUREMENTS AND PAYMENTS**, Add the following to **Subsection 109.4.3, DUE TO EXTRA WORK**:

ALLOWANCE FOR EXTRA WORK

Contract allowance items are provided for the purpose of encumbering funds to cover the costs of possible change order work. The amount of the allowance item is determined by the Engineer and is not subject to individual bid pricing. All bidders shall incorporate the amount pre-entered in the bid proposal and shall reflect the same in the total amount bid for this project.

This allowance item provides an estimated funding to cover unforeseen changes that may be encountered and corresponding extra work needed to complete the contract per plan. Unforeseen extra work, if any, shall be as approved by the Engineer; for example, extension of unit bid prices, negotiated price or time and material, in accordance with MAG Specification Section 109.4 and 109.5.

It shall be understood that this allowance item is an estimate only and is based on change order history of similar projects. It shall not be utilized without an approved contract change order. It is further understood that authorized extra work, if any, may be less than the allowance item.

27. **109 MEASUREMENTS AND PAYMENTS**, Add the following to **Subsection 109.4 COMPENSATION FOR ALTERATION OF WORK**:

109.4.7 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 shall follow the procedure provided in the Federal Acquisition Regulation (FAR) clause 52.214-27, found in 48 CFR Part 52.

28. **109 MEASUREMENTS AND PAYMENTS Subsection 109.7, PAYMENT FOR BOND ISSUE AND BUDGET PROJECTS**, Delete the first three paragraphs in their entirety and replace with the following **Subsection 109.7, PAYMENT FOR BOND ISSUE AND BUDGET PROJECTS**:

1. 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 shall review payment requests and make recommendation of approval or denial within seven (7) calendar days.

This is a federally funded project. Therefore, notwithstanding A.R.S. § 34-221, the City will not withhold retainage from progress payments. Neither the contractor, nor the subcontractor of any tier, may withhold any retainage on progress payments to subcontractors or suppliers of any tier. Withholding of retainage, reducing payments, or sanctions where provided in the contract will be applied to all partial payments.

29. **109 MEASUREMENTS AND PAYMENTS**, Delete Table 109-1 in **Subsection 109.9, DOLLAR VALUE OF MAJOR ITEM**, and substitute the following:

<u>CONTRACT AMOUNT</u>	<u>MAJOR ITEM IS DEFINED AS ANY ITEM EQUAL TO OR 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 shall not increase more than twenty (20) percent without being subject to renegotiation, regardless of the percentage of that item relative to the total contract amount.

30. **110 NOTIFICATION OF CHANGED CONDITIONS AND DISPUTE RESOLUTION**, Add the following to **Subsection 110.1 GENERAL**:
SOILS INFORMATION

The material boring logs shown on the plans or included in these specifications are included for the Contractor's convenience only. It is not intended to imply that the character of materials shown in the logs is representative throughout the project. **The soil borings are indicative of the soil characteristics only at the location and to the depth of each of the borings.**

Even if not specifically shown in the geotechnical information provided, the Contractor may encounter large cobbles, boulders, caliche, conglomerate, hard rock, perched groundwater, historic or prehistoric cultural resources, or other differing site conditions on this project. **No additional compensation will be made for any differing site condition that may be encountered.**

2023
CITY OF PHOENIX SUPPLEMENTS
TO THE
2023 EDITION
MARICOPA ASSOCIATION
OF GOVERNMENTS
UNIFORM STANDARD
SPECIFICATIONS FOR PUBLIC
WORKS CONSTRUCTION



City of Phoenix

**SECTION 326
PLACEMENT AND CONSTRUCTION OF POLYMER MODIFIED ASPHALT CONCRETE**

Subsection 326.5 MIX DESIGN: Delete the first paragraph and replace with the following:

Should the Contractor wish to utilize a project-specific mix design or a mix design from a non-approved source, the mix design(s) shall be submitted to the City of Phoenix Materials Lab fifteen (15) working days prior to the start of the asphalt placement. Included with the mix designs, the Contractor shall also submit the appropriate asphalt concrete samples for mix design verification and laboratory calibration samples as specified by the City of Phoenix Materials Lab. These samples will not include standard City of Phoenix mix designs approved through bi-annual asphalt concrete supplier verifications. Mix designs provided by the agency may be utilized on projects at the Engineer's discretion. The Engineer will review and approve the mix design to assure it contains all the required information as outlined in Section 719. The target values for gradations, binder contents, and air voids will be established as the accepted Job Mix Formula (JMF) based upon the mix design. Mix designs not containing all the information will be returned within 5 working days of receipt of all mix design information for action and resubmission by the Contractor.

Subsection 326.8.1 Placing: Add the following after the third paragraph, listed item (d):

In conditions where the curb and/or gutter is not even and true to grade, the Engineer may require the Contractor to use a ski-type device or string line as described above in (C) to establish the grade of the asphalt concrete surface adjacent to the curb or gutter.

Subsection 326.9 QUALITY CONTROL: Add the following after the first paragraph:

During production of the polymer modified asphalt concrete, the Contractor shall sample and test a calibration mineral aggregate sample prior to the day's production. An asphalt content test using an ignition furnace and gradation shall be required once per each 500 tons of asphalt concrete produced. A Marshall, maximum theoretical density and effective voids of the laboratory-compacted specimens will be determined once per shift. Additional quality control testing may be required during production.

Subsection 326.10.1 Acceptance Criteria: Delete subsection in its entirety and replace with the following:

Polymer modified asphalt concrete will be divided into lots for the purpose of acceptance. A lot shall be one day's production. Each lot shall be divided into sublots of 500 tons or fraction thereof. A City of Phoenix representative will be present at the asphalt supplier plant during production and will facilitate the inspections and sampling of the asphalt concrete. The sampling frequency for hot asphalt concrete at the asphalt plant shall be 1 sample per 500 tons, with a minimum of 1 sample per day, sampled randomly. In lieu of a City of Phoenix representative at the plant, asphalt concrete may be sampled at the same frequency taken from the project by a City of Phoenix designated representative or from the list of approved materials testing labs. The approved list is available through the City of Phoenix Materials Lab. All samples shall be obtained according to the procedures of Arizona Test Method 104 or AASHTO T-168. Each obtained sample will be taken to the City of Phoenix Materials Lab or other designated laboratories for acceptance testing.

The required density shall be obtained using a rolling pattern established by the Contractor and approved by the Engineer. Compaction efforts should continue until the specific gravity of the compacted mixture is not less than 92.0% to 96.0% of the maximum theoretical density, determined in accordance with the requirements of AASHTO T-209.

For permit work, testing that does not strictly adhere to the sampling and testing methodology and requirements outlined in this section shall be disregarded and not considered in any acceptance determination. All required retesting shall be at the expense of the permittee.

Subsection 326.10.2 Gradation, Binder Content, and Air Voids: Replace the first paragraph in its entirety with the following:

The acceptance laboratory will take a sample of the asphalt concrete in accordance with the requirements of Arizona

Test Methods 104 or AASHTO T-168 from each subplot. The minimum weight of the sample shall be 45 pounds. Asphalt binder content and gradation shall be determined in accordance with AASHTO T-308 using the ignition furnace for each subplot. The acceptance laboratory is responsible for obtaining the necessary materials and performing an ignition furnace calibration as outlined in AASHTO T-308 for each asphalt concrete mixture utilized on the project. The correction factor used for each test shall be clearly indicated on the report. Reports that do not include the correction factor, performed as stated in the previous sentences, shall be considered invalid and not allowed to be used for acceptance. The bulk density for Marshall Mix designs shall be tested in accordance with AASHTO T-245. The bulk density for Gyratory mix designs shall be determined in accordance with AASHTO T-312. The maximum theoretical density shall be determined in accordance with the requirements of AASHTO T-209. Effective voids of the laboratory-compacted specimens will be determined at a minimum of once per lot in accordance with the requirements of AASHTO T-269. Should the testing for effective air voids not meet the “Full Payment” or “No Corrective Action” requirements of Table 326-5, additional testing for laboratory air voids on the remaining sublots will be performed as necessary to determine the extent of the deficiency. Acceptance testing results will be furnished to the Contractor and the supplier within 5 working days of receipt of samples by the acceptance laboratory.

Subsection 326.10.2 Gradation, Binder Content, and Air Voids: Delete paragraph before Table 326-4 in its entirety and replace with the following:

If the asphalt binder content is within $\pm 0.50\%$ of the mix design target value, the asphalt concrete will be paid for at the Contract unit price. If the asphalt binder content deviates by more than $\pm 0.50\%$ from the mix design target value, the deficient area will be evaluated by coring at least two 6-inch cores at one additional location at a maximum interval of 100 feet on each side of the deficient sample. The asphalt content of the original deficient sample will be averaged with the asphalt binder content of the two additional core locations to determine compliance with the acceptance requirements. If the resulting average of the asphalt binder content deviates by more than $\pm 0.50\%$ from the mix design target value, then Table 326-4 shall apply to the subplot. If approved by the Engineer, the Contractor may obtain additional cores to assist in formulation of an Engineering Analysis, but the additional cores shall not be used for re-evaluating acceptance.

Subsection 326.10.2 Gradation, Binder Content, and Air Voids: Delete Table 326-4 in its entirety and replace with the following:

TABLE 326-4		
ASPHALT BINDER CONTENT ACCEPTANCE AND PENALTIES		
Deviation from That Permitted (Acceptance to the tenth of a percent)	When Contracting Agency is Owner: Payment Reduction	When Contracting Agency is Not Owner (Permit Work): Payment Reduction **See note Below
Over/Under 0.0% to 0.1%	10%	Extended Warranty for two (2) years with posted bond for the value of the taper mill and overlay
Over/Under 0.1% to 0.2%	25%	Extended Warranty for five (5) years with posted bond for the value of the taper mill and overlay
Over/Under 0.2%	*Removal and replacement of non-compliant lift	*Removal and replacement of non-compliant lift

*The Contractor shall remove and replace the entire subplot that is deficient.

**Additional permit and fee required for extended warranty.

Subsection 326.10.2 Gradation, Binder Content, and Air Voids: Delete the paragraph before Table 326-5 in their entirety and replace with the following:

If the laboratory air voids fall within a range of -1.5% and +2% of the design target, the asphalt concrete will be paid for at the Contract unit price. If the laboratory air voids are outside of this range, the deficient area will be evaluated within the subplot by re-testing of the original laboratory sample. The laboratory air voids of the original deficient

sample will be averaged with the re-tested laboratory air voids to determine compliance with the acceptance requirements. If the resulting average of the laboratory air voids is outside the indicated range, then Table 326-5 shall apply to subplot.

Subsection 326.10.2 Gradation, Binder Content, and Air Voids: Delete Table 326-5 in its entirety and replace with the following:

TABLE 326-5		
ASPHALT BINDER CONTENT ACCEPTANCE AND PENALTIES		
Deviation from That Permitted (Acceptance to the tenth of a percent)	When Contracting Agency is Owner: Payment Reduction	When Contracting Agency is Not Owner (Permit Work): Payment Reduction **See note Below
Greater than -2.7% from target	*Removal and replacement of non-compliant lift	*Removal and replacement of non-compliant lift
-2.7% to -2.1% from target	25%	Extended Warranty for five (5) years with posted bond for the value of the taper mill and overlay
-2.0% to -1.6% from target	10%	Extended Warranty for two (2) years with posted bond for the value of the taper mill and overlay
-1.5% to +2% from target	Full Payment	Full Payment
+2.1% to +2.9% from target	10%	Extended Warranty for two (2) years with posted bond for the value of the taper mill and overlay
+3.0% to +4.0% from target	25%	Extended Warranty for five (5) years with posted bond for the value of the taper mill and overlay
Greater than 4.0% from target	*Removal and replacement of non-compliant lift	*Removal and replacement of non-compliant lift

*The Contractor shall remove and replace the entire subplot that is deficient.

**Additional permit and fee required for extended warranty.

Subsection 326.10.4 Asphalt Pavement Thickness: Delete sentences (1) and (2) in its entirety and replace with the following:

- (1) If the pavement thickness deviates from the target thickness by more than 0.25 inch but not more than 0.5 inch, Table 326-6 will apply and corrective action will be required. This corrective action shall consist of application of a Type II slurry seal Micro-Surfacing coat in accordance with Section 715 or 714, as applicable.
- (2) If the pavement thickness deviates from the target thickness by more than 0.50 inch, corrective action will be required. The deficient area shall be overlaid with no less than a 1-inch-thick lift, for the full width of the pavement to meet or exceed the designed thickness, with appropriate end and edge milling, with a mixture approved by the Engineer. The indicated overlay shall be constructed by the Contractor at no additional cost to the Owner.

Subsection 326.10.4 Asphalt Pavement Thickness: Delete Table 326-6 in its entirety and replace with the following:

TABLE 326-6		
ASPHALT PAVEMENT THICKNESS PAYMENT REDUCTION		
For Thickness Deficiency of More Than 0.25 inches and Less Than 0.50 inches		
Total Specified Asphalt Pavement Thickness exclusive of ARAC (if any)	When Contracting Agency is Owner: Payment Reduction	When Contracting Agency is Not Owner: (Permit Work) *See Note Below
Less than 1.5 inches	50%	Extended Warranty for five (5) years with posted bond for the value of the taper mill and overlay
1.50 to 1.99 inches	33%	Extended Warranty for four (4) years with posted bond for the value of the taper mill and overlay
2.00 to 2.49 inches	25%	Extended Warranty for three (3) years with posted bond for the value of the taper mill and overlay
2.50 to 2.99 inches	20%	Extended Warranty for three (3) years with posted bond for the value of the taper mill and overlay
3.00 inches and greater	17%	Extended Warranty for two (2) years with posted bond for the value of the taper mill and overlay

*Additional permit and fee required for extended warranty.

Subsection 321.10.5.2 Pavement Greater than 1-1/2 Inches in Nominal Thickness: Delete subsection in its entirety and replace with the following:

Achieving the required compaction is the responsibility of the Contractor. The number and types of rollers is the Contractor’s responsibility and shall be sufficient to meet these requirements. The required density shall be obtained using a rolling pattern established by the Contractor and approved by the Engineer. Compaction efforts should continue until the specific gravity of the compacted mixture is between 92.0% and 96.0% of the maximum theoretical density, determined in accordance with the requirements of AASHTO T-209.

Density on the grade shall be determined by the thin lift capable nuclear gauge. This gauge must be recently correlated with actual densities of asphalt cores. This correlation will be accomplished on the first days of paving. A 4-inch core shall be obtained at a minimum of four locations tested by nuclear method. The obtained cores shall be tested for density by the laboratory performing the density testing. Adjustments shall be made to the nuclear gauge according to the manufacture’s procedures. Correlation of the nuclear gauge shall be performed for each mix and gauge utilized during compaction testing. This correlation shall be utilized for the duration of paving if the same gauge is utilized throughout the paving schedule. If a different gauge or mix design is utilized, additional correlation testing shall be performed. Care shall be taken to ensure the same gauge is utilized throughout the paving schedule to ensure continuity throughout the paving process to reduce the amount of correlation cores taken from the roadway.

If the required density is not achieved, then cores shall be taken to determine the density and limits of the deficiency. One core in the deficient area and two additional cores 50 feet on either side of the deficient core location shall be taken. An average of the three values shall be used to determine the amount of the deficiency, if any. Additional testing for density will be performed as necessary to determine the extent of the deficiency. Table 321-8 shall be used in determination of the payment reduction for the total deficient area(s).

The Contractor shall provide the traffic control to facilitate any coring operations necessary for compaction acceptance. Cores will be taken per the Asphalt Concrete Coring Method. This method can be found in Section 321.14. Acceptance testing results will be furnished to the Contractor within 5 working days of receipt of samples by the acceptance laboratory.

TABLE 326-8		
PAVEMENT DENSITY PAYMENT REDUCTION		
Deviation from Specified Compaction Density (92.0%-96.0%)	When Contracting Agency Owner: Reduction in Payment	When Contracting Agency Not Owner (Permitted Work): **See note below
91.0% to 91.9% or 96.1% to 96.3%	15%	Extended warranty for two (2) years with posted bond for the value of the taper mill and overlay
90.5% to 90.9% or 96.4% to 96.5%	20%	Extended warranty for three (3) years with posted bond for the value of the taper mill and overlay
90.0% to 90.4% or 96.6% to 96.9%	25%	Extended Warranty for five (5) years with posted bond for the value of the taper mill and overlay
Below 90.0% or above 97.0%	*Removal and replacement of non-compliant Lift	*Removal and replacement of non-compliant lift

*The Contractor shall remove and replace the entire subplot that is deficient.

**Additional permit and fee required for extended warranty.

Subsection 326.10.6 Engineering Analysis (EA): Delete this Subsection in its entirety.

Subsection 326.11 REFEREE: Replace first paragraph with the following:

In the event the Contractor elects to question the acceptance test results for either asphalt binder content, thickness and density or a combination thereof for a deficient sample, the Contractor may make a written request for additional testing of that deficiency. The Contractor will select an independent and accredited materials lab from the City of Phoenix Approved Laboratory List (referee lab) to perform the additional testing. The Contractor will pay for the cost of all referee testing as a lump sum. Included with the set of samples, the appropriate calibration samples will also be submitted to the referee lab. Only one set of samples for referee testing will be considered for the deficient sample. The results of these determinations will be binding on both the Contractor and the agency.

Subsection 326.11 REFEREE: Replace the first sentence of the third paragraph with the following:

These tests may include asphalt binder content, aggregate gradation, Marshall or Gyratory unit weight, maximum theoretical unit weight and laboratory air voids.

**SECTION 719
POLYMER MODIFIED ASPHALT CONCRETE**

Subsection 719.3.1 General: Add the following after the first paragraph:

Should the Contractor choose to utilize a City of Phoenix mix design from a non-approved source, the mix design(s) shall be submitted to the City of Phoenix Materials Lab fifteen (15) working days prior to the start of the asphalt placement. Included with the mix design, the Contractor shall also submit the appropriate asphalt concrete for mix verification and laboratory calibrations as specified by the City of Phoenix Materials Lab. These samples will not include standard City of Phoenix mix designs approved through biennial asphalt concrete supplier calibrations.

SPECIAL PROVISIONS

1. Delete **MAG Subsections 201.5 PAYMENT, CLEARING AND GRUBBING** and substitute the following:

201.5 PAYMENT, CLEARING AND GRUBBING:

Quantities of clearing and grubbing will be paid for at the contract unit price per square yard. Such price shall include all tree trunks, stumps, brush, limbs, roots, vegetation, and other debris removed in clearing and grubbing shall be removed in all roadway widening areas and disposed of so as to leave the construction site and adjacent areas in a neat and finished condition, free from unsightly debris.

2. Delete **MAG Subsections 215.7 MEASUREMENT** and substitute the following:

215.7 MEASUREMENT

If compensation for stripping is included in the price paid for other items of work the Contractor shall notify the Engineer sufficiently in advance of excavation or other work so that cross-section elevations and measurements of the ground surface may be taken upon completion of stripping.

The contractor will compute the quantity of excavation by survey or other method approved by the Engineer.

3. Add the following new Section, **232 STORM WATER POLLUTION PREVENTION – BEST MANAGEMENT PRACTICES:**

Description

Implementation of "Best Management Practices" (B.M.P.'s) to reduce stormwater pollution shall be undertaken by the Contractor on a multi-tiered, most cost-effective approach. The Contractor shall utilize the lowest-cost acceptable B.M.P. available to address each type of potential stormwater pollution situation encountered on the project. Should this prove ineffective in resolving the stormwater pollution problem, additional, higher-cost B.M.P.'s may need to be employed, upon approval by the City.

Construction Requirements

Typical multi-tiered B.M.P. approaches to construction operations may include:

A. ROADWAY SUBGRADE EXCAVATION:

1. Tier I - The excavated area will create, in effect, a temporary retention area. This may provide adequate control of storm runoff to prevent sediment from leaving the site. Pumping or other methods utilized to drain the excavation shall employ filter fabric or other filtering method to remove sediment before leaving the site or entering the storm drain system.
2. Tier II - Catch basin inlet protection (utilizing filter fabric, gravel, etc.) may be necessary should Tier I controls prove inadequate. Care shall be exercised to ensure that Tier II B.M.P.'s do not result in blockage of drainage and resultant flooding of adjacent properties.

B. OPEN PIPELINE TRENCHES:

1. Tier I - The open trench itself will act as a temporary retention area. The Contractor shall provide a low-cost, readily-installed/removed temporary device on the open end of the pipe to prevent sediment-laden stormwater from entering the pipe. This may consist of a temporary "plug" incorporating filter fabric, a temporary weir, or other device capable of removing sediment before allowing stormwater to enter the pipe. Care must be taken to prevent damming of floodwaters in the excavation that could result in "floating" the pipe.
2. Tier II - If Tier I protection does not prove satisfactory, the Contractor may need to install straw bales, sandbag berms, or temporary diversion dikes around the perimeter of the open excavation to prevent sediment-laden stormwater from entering the open excavation. Due to installation/removal time, such devices need only be installed during periods of likely precipitation and runoff. Earthen dikes are the preferred alternate, due to ease of installation and removal. Care must be taken to assure that runoff is not blocked to the extent that flooding of adjacent properties will result.

C. BACKFILLED PIPELINE TRENCHES:

1. Tier I - As with roadway subgrade excavations, pipeline trenches which have been backfilled but not yet paved will be several inches lower than adjacent pavement areas, and will therefore act as temporary retention areas.
2. Tier II - If the "retention" provided by the backfilled area does not prevent sediment-laden runoff from leaving the excavated area, perimeter controls such as silt fence, straw bales, sandbag berms, or gravel filter berms may need to be installed around the downstream edge(s) of the backfilled area. As with open trenches, the selection of the appropriate measure, extent of its application, and time period during which it is needed will be dependent upon cost, site conditions, ease of installation/removal, and likelihood of precipitation/runoff. Again, care must be taken to ensure that diversion of stormwater onto adjacent properties does not result from these installations.

Another stormwater control method, which the Contractor may need to consider, is limiting the amount of area disrupted and therefore subject to sediment-laden stormwater runoff at any one time. Should such project phasing prove necessary due to the failure of other B.M.P.'s, the Contractor shall revise his construction activities accordingly, at no additional cost to the City.

Standards for installation of the above B.M.P.'s are provided in the Flood Control District of Maricopa County's "Drainage Design Manual for Maricopa County, Arizona, Volume III, Erosion Control". Installation and operation of B.M.P.'s shall be in accordance with that manual.

There shall be no separate measurement or payment for preparing or developing Storm Water Pollution Prevention Plans, or for preparing NOI's or NOT's or obtaining an AZPDES Permit, all these costs being considered incidental to the cost of the project.

Use of individual BMP items shall conform to the Contractor's approved Storm Water Pollution Prevention Plan (SWPPP).

Measurement and Payment

This project includes a pay item "ALLOWANCE FOR STORMWATER POLLUTION PREVENTION BEST MANAGEMENT PRACTICE (BMP'S)". The amount of this allowance is determined by the Engineer and is not subject to individual bid pricing. All bidders shall incorporate the amount pre-entered in the bid proposal and shall reflect the same in the total amount bid for this project.

Payment for various types of necessary BMP's shall be made from this allowance based on approved invoiced cost of the materials only, plus taxes, and a maximum 15 percent markup for overhead and profit. There will be no separate measurement or payment for the preparation or development of the Storm Water Pollution Prevention Plan; labor or equipment necessary to install, maintain or remove the BMP materials; moving existing BMP materials from one location to another on the same project; or constructing BMP swales or berms, all of these costs being considered incidental to the cost of the project.

4. **301 SUBGRADE PREPARATION**: Add the following to **Subsection 301.1, DESCRIPTION**:

The work under Subgrade Preparation consists of all excavating and grading work necessary to bring the existing surface to the section specified on the plans prior to the covering of the prepared subgrade with pavement base materials.

5. **301 SUBGRADE PREPARATION**, Delete **Subsections 301.7, MEASUREMENT, and 301.8, PAYMENT**, and substitute the following:

301.7 MEASUREMENT:

Measurement for subgrade preparation shall be made by the square yard of the roadway areas excavated and graded and subsequently covered with pavement base materials. Payment for necessary grading for items outside of the lip of gutter shall be included in the cost of those items.

301.8 PAYMENT

Payment will be made at the unit price quoted in the bid proposal for the bid item "SUBGRADE PREPARATION".

6. Delete **MAG Subsections 309.5 MEASUREMENT and 309.6 PAYMENT** and substitute the following:

309.5 MEASUREMENT

The quantity of lime slurry treated soils shall be measured by the square yard, measured in place, treated, compacted, to the proper depth, and accepted.

The quantity of curing seal shall be measured by the square yard.

309.6 PAYMENT

The lime treated soils measured as provided above, will be paid for at the contract price per square yard, which price shall be full compensation for the item complete, as herein described and specified.

The Owner or Engineer reserves the option to pay for the lime separately. Should this option be chosen, the lime treated soils measured as provided above will be paid for at the contract price per square yard, which shall include full compensation for the item less lime, as herein described and specified. The lime materials will be paid for by the contract price per ton based on hydrated lime. If quicklime in slurry form is used, there will be an additional pay factor of 1.3 applied to determine the actual amount of hydrated lime placed.

Payment for curing seal will be by the square yard, based on the rate of application as requested by the Engineer.

7. **317 ASPHALT MILLING** Add the following to **Subsection 317.2 CONSTRUCTION REQUIREMENTS** and **Subsection 317.3 MEASUREMENT AND PAYMENT**:

317.2 CONSTRUCTION REQUIREMENTS

The Contractor shall mill existing pavement adjacent to existing gutters to a point approximately 1.5-inch below the gutter lip. Depth of grinding shall be measured from the top of the concrete gutter. All existing material built up over the gutter shall be removed as part of this work. The Contractor shall also mill a 24-foot width transverse to the traveled roadway at endpoints of overlay, and at intersecting side streets when directed by the Engineer to ensure smooth transition between existing pavement and new overlay pavement.

The Contractor shall protect all milled surfaces from deterioration and shall repair any damage prior to placing overlay pavement. The Contractor shall also protect adjacent properties from damage that could be caused by loose tailings.

The contractor shall phase the project to minimize the traffic on milled surface. Traffic on a milled surface for more than 7 days shall require micro milling and tack coat which at no additional cost to the City.

The Contractor shall notify the City of Phoenix Street Transportation Department Traffic Signal Shop (262-6204) and the Engineer prior to milling at signalized intersections, or any other location where traffic signal loop detectors may be damaged by the milling operation. Each of these locations will be reviewed, and the milling operation may be modified to avoid damage to the loops. This may necessitate the use of smaller milling heads in these locations. Any additional costs associated with handling these special areas shall be considered incidental to the cost of milling. The Contractor shall be responsible for the cost of replacement of damaged signal loops if the Signal Shop and the Engineer are not notified prior to the milling operation.

The Contractor shall coordinate with the City Traffic Signal Crews Shop (262-6204) and the Engineer prior on the new installation of loop detectors.

317.3 MEASUREMENT AND PAYMENT:

Measurement for pavement milling will be by the square yard. Payment will be made at the unit price bid for 'ASPHALT CONCRETE PAVEMENT MILLING', and shall be considered compensation in full for all labor, materials, and equipment necessary to satisfactorily complete the work

8. **321 PLACEMENT AND CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT,** Add the following to **Subsection 321.1 DESCRIPTION:**

The permanent asphalt concrete roadway pavement section shall consist of the following:

For Happy Valley Road: As specified on the plans; pavement structure section No. 1: 1.5 inches of Polymer Modified Asphalt Concrete (Section 719) on 5.0 inches Asphalt Concrete Type C-3/4-inches (2 lifts each of 2.5 inches) on total 4 inches compacted Aggregate Base Course on 6 inches minimum 95% compacted lime stabilized subbase.

9. **340 CONCRETE CURB, GUTTER, SIDEWALK RAMPS, DRIVEWAY AND ALLEY ENTRANCE,** Add the following to **Subsection 340.2.1 Detectable Warnings; Subsection 340.3.1 Detectable Warnings; Subsection 340.5 MEASUREMENT; and Subsection 340.6 PAYMENT:**

Add the following to **MAG Subsection 340.2.1 Detectable Warnings:**

Detectable warning material will meet the latest ADA requirements. Approved detectable warning material manufacturers include the following:

- a. Strongo, TekWay Dome-Tiles
- b. Tuftile, Cast Iron ADA Detectible Warning Plates

c. Neenah Foundry, Cast Iron Detectable Warning Plate

Alternate materials may be submitted subject to review and approval prior to use. All detectable warnings will be of the same type and color within the project limits, unless otherwise specified.

Add the following to **MAG Subsection 340.2.1.1 Color and Contrast:**

Unless shown otherwise on the plans, the color of the detectable warning tiles to be used shall be terracotta color on grey concrete and yellow color on colored concrete sidewalk ramps – color to be approved by the Engineer.

Add the following to **MAG Subsection 340.3.6 Detectable Warnings:**

Detectable warning plates will be installed per manufacturer's recommended specifications. The layout of plates will be determined by the Contractor, and if necessary, pre-cut as needed prior to beginning the installation process to meet ADA placement requirements. Plates will not be cut to less than half their size. Plates will be cut as recommended by the manufacturer.

Add the following to **Subsection 340. 5 MEASUREMENT and 340.6 PAYMENT:**

Sidewalk Ramps, Measurement and Payment

Sidewalk ramps will be constructed in accordance with Phoenix Standard Details or special details called out on the plans.

Payment for sidewalk ramps will be made under the bid items for " Truncated Domes for Sidewalk Ramps", and will include all costs for labor, materials, equipment, forming, placement and finishing for complete sidewalk ramp installation. The cost of any special curb at the back of sidewalk ramps will be measured by the square foot and paid for as "SIDEWALK".

Decorative pavement or paving stones as shown on the plans and used in sidewalk areas will be measured by the square foot installed, and paid for under the bid item for "DECORATIVE PAVEMENT FOR LANDSCAPING PER DETAIL", including all subgrade preparation, leveling sand, etc. to provide a complete installation.

Concrete Driveway and Sidewalk Slab Connections, Measurement and Payment

This work will consist of constructing concrete driveway and sidewalk slab connections to match existing at locations shown on the plans or requested by the Engineer. The slab thickness will conform to the applicable driveway or sidewalk detail.

Measurement and payment for this work will be made per square foot complete and in place for the appropriate pay item "CONCRETE DRIVEWAY ENTRANCE" or "CONCRETE SIDEWALK".

10. **342 INTERLOCKING CONCRETE PAVER INSTALLATION,** Add the following to **Subsection 342.2.4 CONCRETE PAVERS:**

(G) **Pattern:** Use Herringbone 45-degree pattern.

(H) **Color:** Three Tone Brown

11. **345 ADJUSTING FRAMES, COVERS, VALVE BOXES, AND WATER METER BOXES,** Revise **Subsection 345.1 DESCRIPTION, Subsection 345.5 MEASUREMENT, and Subsection 345.6 PAYMENT** as follows:

Delete **Subsection 345.1 DESCRIPTION** in its entirety, and substitute the following:

Adjustment of manhole frames, covers, clean outs, valve boxes, survey monument boxes (and water meter boxes if located in the pavement) to finish grade shall be done AFTER placement of the final surface course pavement.

Any missing manhole frames or covers and water valve or survey monument box hardware (such as lids, for example) shall be reported in writing to the Engineer during the initial lowering process to allow arrangements to be made to obtain replacement hardware. Missing hardware that is properly reported to the Engineer will be supplied to the Contractor by the City of Phoenix or the appropriate private utility company.

Replacement of any missing hardware that was not reported to the Engineer initially as specified, that comes up missing later when these facilities are brought back up to finish grade, shall be the full responsibility of the Contractor, at no additional cost to the City.

In addition, all manhole frames and covers, water valve and survey monument boxes or other related hardware removed by the Contractor during the lowering process shall be maintained in a secure area, and the Contractor shall bear full responsibility for this hardware material. Any hardware lost by the Contractor shall be replaced in-kind, at no additional cost to the City.

All areas of existing pavement removed for adjustments that will be subjected to traffic prior to placement of final concrete collar rings shall be temporarily filled with hot-mix Type D-1/2 asphalt and roller-compacted flush with the adjacent pavement. There shall be no separate measurement or payment for this temporary hot-mix asphalt or placement or subsequent removal, the cost being considered incidental to the cost of the adjustment.

After removal of asphalt pavement in the area of adjustment, and prior to placement of the final concrete collar ring around the frame or valve box (as shown on City of Phoenix Detail P-1391 and MAG Detail 422), the asphalt pavement in proximity of the adjustment shall be rolled with a self propelled, steel wheel roller.

The concrete collar ring around the frame or valve box shall be circular, and shall be a minimum of eight (8) inches thick, placed flush with the adjacent new pavement surface. At a minimum, concrete shall be MAG Class 'AA' on all paved streets. All concrete shall be obtained from plants approved by the Engineer.

A single No. 4 rebar hoop shall be placed in each adjustment collar. The hoop diameter shall be such that its placement is centered between the edge of the manhole frame or valve box, and the outside edge of the concrete collar. The depth of the hoop shall be such that it is centered in the thickness of the collar. Each concrete ring shall be scored radially at quarter-circle points. Score lines shall be 1/4-inch wide by 1/2-inch deep. The concrete collar surface shall be rough broom-finished. All pavement removed for adjustments shall be replaced with concrete.

Traffic shall not be allowed on the collars until the concrete has reached a minimum compressive strength of 2500 psi on residential streets, and 3000 psi on collector and major streets. On major streets, the Contractor shall use "high-early" cement in the concrete mix, approved by the Engineer, to minimize delay in re-opening the street to traffic.

Prior to commencing work on the adjustments, the Contractor shall submit a written adjustment plan and schedule to the Engineer for approval. At the request of the City, the contractor will provide access to all services under construction at no additional cost.

Sewer manhole frames and covers shall be matched, kept together, and replaced to their original locations. Manholes with existing corrosion coating shall be re-coated after the final adjustment has been completed. The Contractor shall remove existing asphalt, chip seal, or other materials from all sewer manhole covers and water valve box lids to be adjusted on this project. The Contractor's method for removal shall be approved by the Engineer prior to actual work. Cover cleaning shall be

completed prior to adjustment of frames. Also, all water valve risers shall be thoroughly cleaned to fully expose the valve operating nut.

QUARTER SECTION MAPS FOR WATER AND SEWER LINES

The Contractor may obtain up to three sets of waterline and sewerline quarter section maps for the streets included in this project after the contract is awarded and issued. To order the maps, the Contractor shall bring an official contract specification book and a list of desired quarter section maps to the Technical Support Services counter on the 8th Floor of City Hall, 200 W. Washington Street. Up to three sets of maps will be provided at no cost to the Contractor. If more than three sets are requested, the Contractor shall purchase the additional sets.

WATER VALVE AS-BUILTS

Upon completion of water valve box adjustments, the Contractor shall provide one complete accurate and clearly legible set of as-built waterline Quarter Section maps to the Engineer. The Contractor shall mark and color code all water valves on the maps as follows:

Blue- All valves shown on the Q.S. map found and adjusted.

Yellow- All valves shown on the Q.S. map but not found in the field.

Red- Any valve not shown on the Q.S. maps but discovered and adjusted. (Draw valve symbol on map at appropriate location and provide offset and location dimensions for valves in this category.)

12. Delete **MAG Subsections 345.5 MEASUREMENT and 345.6 PAYMENT** and substitute the following:

345.5 MEASUREMENT

Measurement for adjustments shall be per each respective item.

345.6 PAYMENT

Payment for the appropriate item will be made at the unit price bid for 'ADJUST EXISTING MANHOLE FRAME AND COVER, STANDARD DETAIL 422'; 'ADJUST EXISTING TYPE 'A' WATER VALVE, STANDARD DETAIL P-1391 AND P-1391-1'; 'ADJUST EXISTING SEWER CLEAN-OUT FRAME & COVER, STANDARD DETAIL P-1270'; 'ADJUST SURVEY MONUMENT HANDHOLE FRAME AND COVER, STD DET P-1270'; or ADJUST EXISTING WATER METER BOX & COVER. Payment will include all labor, materials, and equipment necessary to satisfactorily clean and make complete adjustments.

There will be no separate measurement or payment for adjusting NEW manhole frame & covers, valve boxes, sewer clean-out frame & covers or water meter boxes constructed with the project. Payment for adjusting these new facilities is considered included in the price bid for the appropriate new item.

Add the following new **Section 346 ADJUSTING NON-CITY UTILITIES** as follows:

346.1 DESCRIPTION

The utility companies may utilize the Contractor to adjust their frames, covers, and valve boxes for this project.

The Contractor shall coordinate with the Engineer and the representatives of the various utilities

regarding the adjustment and the inspection requirements of their facilities. The Contractor shall be responsible for obtaining and adhering to the specifications and any other special requirements from the utility companies.

346.2 MEASUREMENT

Measurement of adjusted private utility features shall be on a per each basis.

346.3 PAYMENT

Payment for this work will be made at the unit price bid per each item adjusted to grade, under the proposal item "ADJUSTING FRAMES, COVERS, VALVE BOXES ON EXISTING NON-CITY UTILITIES, CONTINGENT ITEM", and shall be compensation in full for complete and final adjustment, including any utility inspector costs associated with these adjustments, regardless of the type of manhole or valve. The individual utility companies have the right to accept or reject the Contractor's bid price for their portion of adjustments. If the utility company rejects the Contractor's price, the utility company will adjust their own facilities and the item quantity will be adjusted accordingly.

13. 350 REMOVAL OF EXISTING IMPROVEMENTS, Add the following to new Subsection 350.2.4 Removal of Structures:

Removal of Catch Basins will be measured and under item "REMOVE CATCH BASIN, BACKFILL AND COMPACT".

Removal of Headwalls will be measured and paid under "REMOVE HEADWALL, BACKFILL AND COMPACT".

14. 350 REMOVAL OF EXISTING IMPROVEMENTS, Add the following to new Subsection 350.3 Miscellaneous Removal and Other Work:

(I) Remove Decorative Brick Pavers will be measured and paid under item "REMOVE DECORATIVE BRICK PAVERS".

(J) Remove Pipe, Backfill & Compact will be measured and paid under item "REMOVE PIPE, BACKFILL AND COMPACT".

(K) Remove Pipe will be measured and paid under item "REMOVE PIPE".

(L) Remove Existing Bushes, Shurbs, Cacti, or Small Trees will be measured and paid under item "REMOVE EXISTING BRUSHES, CACTI, OR SMALL TREES".

(M) Remove Block Wall will be measured and paid under item "REMOVE BLOCK WALL".

(N) Remove Valley Gutters will be measured and paid under item "REMOVE PORTLAND CEMENT CONCRETE SIDEWALK, DRIVEWAY, VALLEY GUTTER & SLAB".

(O) Remove Driveways will be measured and paid under item "REMOVE PORTLAND CEMENT CONCRETE SIDEWALK, DRIVEWAY, VALLEY GUTTER & SLAB".

(P) Remove Slabs will be measured and paid under item "REMOVE PORTLAND CEMENT CONCRETE SIDEWALK, DRIVEWAY, VALLEY GUTTER & SLAB".

(Q) Removal of Ramp Curb shall be considered incidental to the cost of the project. No separate measurement or payment shall be made for this item.

(R) Remove Concrete Single Curb will be measured and paid under item "REMOVE PORTLAND CEMENT CONCRETE SINGLE CURB, CURB & GUTTER, HEADER CURB OR EMBANKMENT CURB".

(S) Remove Concrete Curb and Gutter will be measured and paid under item "REMOVE PORTLAND CEMENT CONCRETE SINGLE CURB, CURB & GUTTER, HEADER CURB OR EMBANKMENT CURB".

(T) Remove Header will be measured and paid under item "REMOVE PORTLAND CEMENT CONCRETE SINGLE CURB, CURB & GUTTER, HEADER CURB OR EMBANKMENT CURB".

(U) Remove Asphalt Concrete Pavement will be measured and paid under item "REMOVE ASPHALT CONCRETE PAVEMENT".

(V) Remove Tree, 12" Diameter and Larger will be measured and paid under item "REMOVE TREE, 12" DIAMETER AND LARGER".

(W) Sign Removal will be measured and paid under item "SIGN REMOVAL (INCLUDING POST AND FOUNDATION)".

15. Add the following new **Section 351 STREET LIGHTING INSTALLATION** as follows:

351.1 TRENCHING FOR UNDERGROUND STREET LIGHT CIRCUITS

Materials and construction shall be in accordance with the Arizona Public Service Company (APS) "Underground Distribution Construction Standards", MAG, City of Phoenix Standard Specifications and these Special Provisions. The work shall consist of the following items:

1. Providing all trenching, bedding, backfilling and compacting for streetlight circuits.
2. Installing junction boxes and ground rods provided by Arizona Public Service Company (APS).
3. Furnishing and installing 2 1/2-inch conduit, sweeps and conduit caps, including the running of a mandrel through the system.
4. Installing APS furnished flat strap in all conduit runs.

The Contractor shall be responsible for obtaining the APS Standards from the APS Standards Department (602-371-6383, Barbara McMinn). A copy of these standards is available for perusal at the City of Phoenix Street Transportation Department Utility Coordination Office.

All work will be subject to inspection by Arizona Public Service and City of Phoenix forces. The Contractor shall call APS Contracts Section at 602-371-6512 at least five (5) working days prior to starting trench work to meet with the APS Inspector and review inspection requirements.

The APS Liaison Agent is Mr. Bobby Garza 602-371-7989 or 602-361-6840 (mobile).

Trenching shall be completed prior to sidewalk construction and ahead of pole installation. The Contractor shall backfill and compact the trench in accordance with Section 601. The trench shall be per APS plans.

Measurement and Payment

Measurement shall be per linear foot, and payment shall be at the unit price bid per linear foot for trenching installed and shall be compensation, in full, for all labor, equipment and materials necessary for the satisfactory completion of trenching and bedding; furnishing and installing conduit and sweeps; installing APS-provided junction boxes and ground rods; installing APS-provided flat

strap in all conduit runs; furnishing and installing sono tubes and related items; and backfilling and compacting in accordance with the Standard Specifications and these Special Provisions.

The Contractor shall notify the APS inspector assigned to this project at least two weeks prior to needing the APS crew for setting streetlight poles and pulling conductor wire and energizing the system. The Contractor shall anticipate that APS crews will typically take approximately four hours for each complete streetlight installation.

16. Add the following new **Section 351 STREET LIGHTING INSTALLATION** as follows:

351.2 STREET LIGHTING INSTALLATION

Description

The Contractor shall furnish and install all above-ground streetlight equipment (poles, luminaire arms, luminaires, photocells, etc.) in accordance with the plans.

The Contractor shall submit shop drawings for review and approval by the Engineer and the appropriate Power Company on all streetlight equipment to be provided by the Contractor.

The Contractor shall coordinate streetlight equipment installation efforts to avoid any damage to other elements of project construction, and shall provide a complete, connected system installation ready for the Power Company to pull conductor wires and energize the streetlight system.

All work will be subject to inspection by the Power Company and City of Phoenix forces. The Contractor shall call the Power Company at least five (5) working days prior to starting work to meet with the Power Company Inspector and review inspection requirements.

Measurement and Payment

Measurement shall be per each complete street light installed, and payment shall be at the unit price bid per each street light installed, and shall be compensation in full for all labor, equipment and materials necessary for the satisfactory installation of street light equipment, including furnishing and installing street light poles, luminaire arms, luminaires, photocells, and all other related equipment items in accordance with the plans, Standard Specifications and these Special Provisions.

17. **401 TRAFFIC CONTROL**, Add the following to **Subsection 401.4 TRAFFIC CONTROL MEASURES**:

SEQUENCE OF CONSTRUCTION

The sequence of construction shall conform to the requirements of the Special Traffic Regulations.

The project shall follow a phasing plan approved by the Engineer. All lanes shall be maintained on a paved surface at all times during construction. This may be accomplished by using existing, new, or temporary asphalt pavement. Trenches shall be completely backfilled and either paved with temporary asphalt pavement, or covered with metal plating as necessary to comply with this requirement and the "Special Traffic Regulations".

Night work will **not** be allowed on this project, unless required by the City of Phoenix. If the City of Phoenix requires work to be done at night, it will be done at no additional cost to the City.

The right to direct the sequence of construction is a function vested solely with the Engineer. Prior to commencement of the work, the Contractor shall prepare and submit to the Engineer, a written phasing plan and work schedule for the project. This plan and work schedule shall be submitted to

the Engineer at the Preconstruction Meeting for review.

When approved, the phasing plan and work schedule shall not be changed without the written consent of the Engineer. Orderly procedure of all work to be performed under this contract shall be the full responsibility of the Contractor. The work schedule shall include the hours per day and the days per week that the Contractor plans to work on the project site.

18. **401 TRAFFIC CONTROL**, add the following to **Subsection 401.5 GENERAL TRAFFIC REGULATION**:

TRAFFIC REGULATIONS

- A. The following shall be considered Arterial streets:

Happy Valley Road, 67th Avenue, 55th Avenue, 51st Avenue, 43rd Avenue, 39th Drive, and 35th Avenue

The following shall be considered Collector streets:

64th Avenue, 61st Avenue, 47th Avenue, 37th Drive

- B. All traffic and/or traffic control devices on this project shall be provided, maintained and/or controlled as specified in the City of Phoenix Traffic Barricade Manual, latest edition and addendums thereof.
- C. Permission to restrict City streets, sidewalks and alleys (street closure permits) shall be requested as specified in the City of Phoenix Traffic Barricade Manual, latest edition and addendums thereof.
- D. Unless otherwise provided for in the following "Special Traffic Regulations", all traffic on this project shall be regulated as specified in the City of Phoenix Traffic Barricade Manual, latest edition and addendums thereof.
- E. No deviation to the "Special Traffic Regulations will be allowed or implemented unless submitted to the Engineer for review and approval two (2) weeks prior to proposed work.
- F. Only City of Phoenix certified contractors can set, move, or remove temporary traffic control devices (signs, barricades, etc.). This annual certification can be scheduled by calling 602-262-6235.
- G. Civil Sanctions for temporary traffic control violations apply as follows:

Civil Sanction Per Day	Violation Description
\$1,500	Creating an eminent risk of death or injury to the public within the public right-of-way
\$1,000	Restricting the right-of-way without proper certification or a right-of-way temporary use permit
\$1,000	Restricting traffic during peak traffic hours as described in the <u>Traffic Barricade Manual</u> without authorization
\$1,000	Failing to correct or cure a violation, as listed in this schedule, within the

	time period stated on the warning notice
\$1,000	Restricting traffic at signalized intersections without any work occurring
\$500	Closing a sidewalk improperly or closing a sidewalk without proper certification or closing a sidewalk without a right-of-way temporary use permit
\$500	Violating the restriction limits, times and locations, of the right-of-way temporary use permit
\$500	Missing or improper use of advance warning signs
\$500	Missing or improper use of barricades and channelizing devices
\$250	Leaving advanced warning signs facing traffic after restriction has been removed – per one traffic direction
\$250	Leaving traffic control devices in the right-of-way twenty-four hours after right-of-way temporary use permit expires, unless a request for a permit extension is received by the City prior to the expiration of such permit
\$250	Use of “unacceptable” quality traffic control devices as described in the Traffic Barricade Manual
\$250	Rendering a bus stop inaccessible without relocating it or making other accommodations

H. Parking Meter Fees: To take a parking meter out of service requires a \$35 application fee and \$10 per meter per day.

19. **401 TRAFFIC CONTROL,** Add the following to **Subsection 401.5 GENERAL TRAFFIC REGULATION:**

SPECIAL TRAFFIC REGULATIONS

Any Restrictions and/or Closures will only be approved based on scope of work.

Traffic restrictions are not permitted on Arterial/Collector streets during peak traffic hours (6:00 a.m. to 8:30 a.m. and 4:00 p.m. to 6:30 p.m. weekdays). Outside of these hours the following applies:

Arterial Streets

Minimum number of travel lanes to be open to through traffic:

- a. If more than four lanes exist:.....Two will be open each way;
- b. If four or less lanes exist:One will be open each way
- c. On one-way streets:.....Two lanes open

At signalized intersections, a minimum of four lanes (two each way) plus left-turn lanes will be maintained open from 8:30 a.m. to 4:00 p.m., and from 6:30 p.m. to 6:00 a.m., Monday through Fridays including weekends unless otherwise noted within the approved TRACS permit issued to the contractor.

Collector Streets

A minimum of two travel lanes (one each way) will be open to through traffic.

At signalized intersections, a minimum of two lanes (one each way) plus left-turn lanes will be maintained open from 8:30 a.m. to 4:00 p.m., and from 6:30 p.m. to 6:00 a.m., Monday through

Fridays including weekends unless otherwise noted within the approved TRACS permit issued to the contractor.

Pre-construction Field Meeting

Prior to requesting a TRACS Permits, the Contractor must coordinate in advance with the construction inspector to schedule a pre-construction field visit. The following personnel shall attend the meeting: Contractor, contracted barricade company, construction inspector and right-of-way inspector.

Nighttime Regulations

To minimize disruption to traffic, crews may be requested to work at night during off-peak hours. In this case, an after-hours permit will be required to authorize work in residential areas. Permits may be granted for up to 30 days for hours including nights, weekends, and holidays and are issued under Phoenix City Code 23-14 for building and roadway construction by the Planning and Development and Street Transportation departments, respectively. The purpose of the permits is to authorize work yet minimize loud and disturbing noises in residential areas due to construction or maintenance activities.

Variable Message Boards

Variable Message Boards (VMB) shall be provided on this project, 24 hours per day, from up to 10 days prior to any roadway closures and from at least 5 days prior to; maintaining a single thru lane at a signalized intersection, restricting left turn movement or 24-hour lane restrictions. The VMB shall remain in place until all roadway traffic restrictions are removed or approval from the area Right-of-Way Inspector.

Special Sign Requirements

1. The Contractor shall provide, install and maintain advance notification, public informational and directional access signs (for businesses, churches, hospitals, schools, etc.) that may be required by the Engineer. These signs may include, but are not limited to, portable changeable message signs, radar/speed sensing trailers, and other applicable Intelligent Transportation System type devices. The cost shall be included in the bid item for Traffic Control Devices.
2. Project signs shall be placed on each end of where the project starts, providing project number, contractor doing work and hotline number

No Parking Signs

When used, temporary NO PARKING signs must be placed 72 hours in advance for notification.

Signs should be spaced 80 feet apart for collector and arterial streets. On local Streets, a minimum of one (1) sign must be placed in front of each affected resident not to exceed 80 feet.

Signs must be clearly marked with "Date" to "Date" and the time period of the no parking.

NO PARKING Signs must be new and not reused, dates and times must be legible.

Contractor must provide Parking enforcement a picture of the placement of the no parking sign with a date and time stamp on the picture.



1.500" Radius, 0.375" Border, 0.375" Indent, Red on White;
 "TEMPORARY" B; "NO" B; "PARKING" B;
 "DATE TO DATE" B; "TIMES(S)" B;

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.

The Contractor shall provide one off-duty police officer, as defined in the City of Phoenix Traffic Barricade Manual, at signalized intersections affected from 6:00 a.m. to 6:30 p.m. weekdays, and

during working hours nights and weekends when traffic is restricted (as described in the Traffic Barricade Manual).

When construction activities do not restrict traffic through the intersections, police officer hours may be reduced or suspended at the direction of the ROW Inspector.

Signalized Intersection Requirements

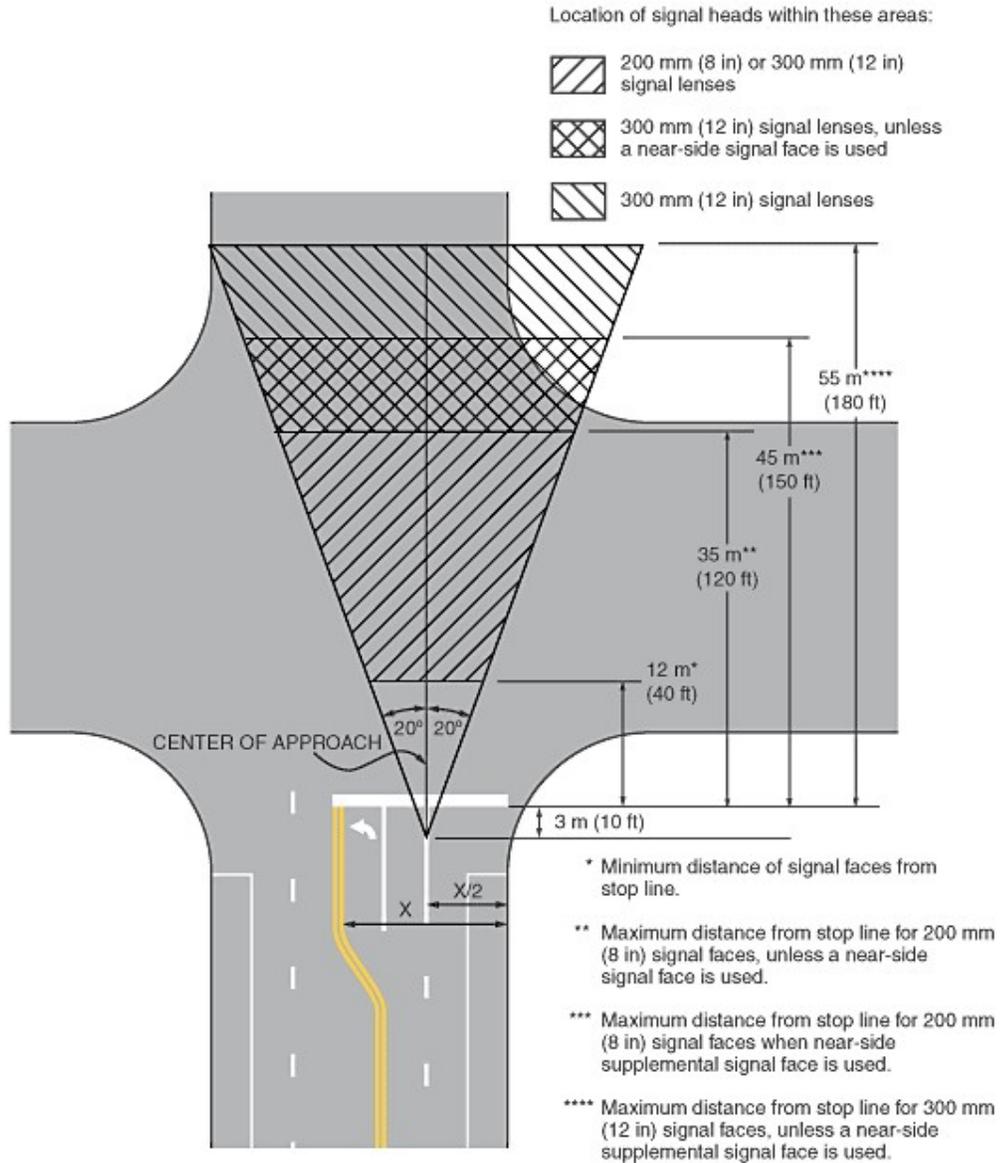
When left turns are prohibited at signalized intersections with left-turn arrow indications or when working in vicinity of a signalized intersection, the contractor will coordinate with the project inspector five days in advance and provide a written schedule indicating days, times and specific locations where left turns will be prohibited or where signals will be interrupted. The project inspector will notify the City Traffic Signal Shop (phxtmc@phoenix.gov) at least 72 hours in advance to make arrangements for arrow indications to be turned off or to coordinated signals being affected by the construction.

The contractor shall maintain the project inspector informed of any schedule changes or when work will be completed. When the work has been completed the inspector will immediately notify Traffic Signal Shop (phxtmc@phoenix.gov) so they can reactivate the left-turn arrow.

Traffic Signal Head Visibility Requirements

The contractor shall maintain a "40-degree Cone-of-Vision" at all intersections, for full view of the intended traffic. If during construction, traffic will be positioned in such a manner that the driver cannot see a minimum of two (2) traffic signal head indications within 20-degrees either side of straight ahead (40-degree Cone-of-Vision), immediately contact the Signal Engineer at 602-262-4693 prior to the start of any work.

Figure 4D-2. Horizontal Location of Signal Faces



Note: This figure illustrates the horizontal location of signal faces.

Local Access Requirements

The Contractor shall maintain local access to all side streets, access roads driveways, alleys, and parking lots at all times and shall notify residents 72 hours in advance of any restrictions which will affect their access. The Contractor shall restore the access as soon as possible. If the primary access cannot be restored in a timely manner, the Contractor shall provide an alternative which shall be pre-determined with the residents prior to imposing any restrictions. Any local street restrictions imposed shall be such that local area traffic circulation is maintained.

Business Access Requirements

Access shall be maintained to adjacent businesses at all times during their hours of operation. Access may be maintained by such measures as constructing driveways in half sections, or by providing bridging over new concrete. Properties with multiple driveway access will not have more than one driveway access restricted at any given time. While the one driveway is restricted, access to the other adjacent driveways will be maintained and unrestricted. Access to adjacent driveways shall be provided during all non-working hours. Any business restrictions shall be coordinated with the affected business in writing at least fourteen (14) days prior to imposing restrictions.

Pedestrian Access Requirements

The Contractor shall ensure that all sidewalks on this project remain in compliance with all the issues outlined by the American Disabilities Act of 1990. All pedestrian-walking areas, whether paved or unpaved, shall be maintained open and safely or a suitable pedestrian detour route will be provided. Such measures as backfilling or ramping at a 12:1 slope to existing sidewalks, or providing alternate sidewalk areas adjacent to existing sidewalks may be used. Right-of-Way inspector may also request an ADA/Pedestrian plan for any proposed sidewalk restrictions or closures. In high pedestrian use areas, the Engineer may request temporary hard-surface walkways, and/or covered pedestrian walkways to be installed at no additional cost to the City.

Frontage Road Access Requirements

Local access shall be maintained at all times on frontage roads. Frontage roads shall not be used for through traffic, equipment parking, material storage, or spoil stockpile area. Frontage road closures shall follow the same special provisions as described in "Local Access Requirements".

School Access Requirements

The Contractor shall provide clean and safe school zones, crosswalks, and walkways for students attending nearby schools during all hours of school use.

This may require backfilling trenches, temporary pavement, shoring, plating, or pedestrian bridges with handrails across open trenches.

In addition to school zones and crosswalks, the Contractor shall maintain accessibility to all school bus routes during all hours of school use. The Contractor shall notify the school Principal(s) and the school Transportation Director at least fourteen (14) days prior to any restrictions, and shall restore access as soon as possible.

Church Access Requirements

The Contractor shall maintain a high level of access to churches during all hours of church use. The Contractor shall coordinate any access restrictions with the clergy at least fourteen (14) days prior to any restrictions, and shall restore access as soon as possible.

Fire Station Access Requirements

The Contractor shall maintain emergency vehicle access to and from the fire station at all times. The Contractor shall coordinate with the Fire Station Commander at least seven days prior to any restrictions and shall restore access as soon as possible. Coordinate with Fire Station 48 located at 5230 W Happy Valley Road. Maintain emergency access at all times.

Police Station Access Requirements

The Contractor shall maintain emergency vehicle access to and from nearby police stations at all

times. The Contractor shall coordinate with the Police Station Commander at least seven days prior to any restrictions and shall restore access as soon as possible.

City Park Access Requirements

The Contractor shall maintain access to nearby parks during park hours. Any restrictions shall be coordinated with the appropriate Parks District Supervisor at least seven (7) days in advance, and full access shall be restored as soon as possible.

Recreational Trail Crossing

The Contractor shall maintain the trail crossings safely open at all times, and shall maintain all special trail signs required.

Canal Access Road Requirements

Canal access and maintenance roads shall remain open at all times.

Any work that may affect this project shall be coordinated with the appropriate Agency contact at least fourteen (14) working days in advance.

Coordination With Other Agency Projects

The Contractor will coordinate and schedule work to minimize disruption or conflicts with the following other Agency projects.

Any work that may affect this project will be coordinated with the appropriate Agency contact at least 14 days in advance.

Sanitation Pick-up

The Contractor shall provide sanitation pick-up for affected residents by relocating trash containers, or by providing alternative measures acceptable to the Sanitation Division of the City Public Works Department (602-256-3310).

Special Events

Should there be special events scheduled to take place during the construction of this project, it is the responsibility of the Contractor to coordinate their Construction schedule around the special event. No compensation for delays associated with special events will be considered.

Any special events that may arise all restrictions may need to be altered or removed for that event.

Bus Stops

The Contractor shall maintain all existing bus stop locations on this project in a safe manner, or provide alternate bus stop locations and related directional signage as required by the Inspector. Relocation of bus stops shall be coordinated through the area . Relocation of bus stops shall be coordinated through the City of Phoenix Public Transit Department, contact 602-534-6284 or 602-262-4087.

Flagging of Traffic

No flagging of traffic will be permitted during the peak traffic hours of 6:00 a.m. to 8:30 a.m. and 4:00 p.m. to 6:30 p.m. weekdays. If construction requires, intermittent flagging will be allowed from

8:30 a.m. to 4:00 p.m., if approved by City project inspector, to facilitate access for heavy construction equipment.

Traffic Control Plans

The Contractor shall submit a traffic control plan for approval, showing placement of all traffic control devices, including all conflicting signs to be covered/removed or relocated, or other features that may conflict with the placement of temporary signage. This plan shall be professionally drawn on a reproducible medium, and shall be submitted to the Engineer two (2) weeks prior the contract start time or at the Pre-Construction conference, whichever occurs first.

Holiday Season Requirements

Restrictions near retail shopping areas on Major or Collector streets during the Holiday Season from November 23rd to January 1st will not be approved without pre-approval from the RMP Inspector. Contractor shall plan and coordinate their work schedule around this holiday season requirement.

Temporary Traffic Control Zone and Safety

At the Pre-Construction conference, the Contractor will designate an employee, other than the Project Superintendent, who is knowledgeable in the principles and methods of proper traffic control and safety. This employee will be available on the project site during all periods of construction to coordinate and maintain safe, acceptable and effective temporary barricading whenever construction affects traffic. This person will be authorized to receive and fulfill instructions from the Engineer and will supervise and direct traffic control. Instructions and information given by the Engineer to this person will be considered as having been given to the Contractor.

Failure to maintain temporary traffic control devices in accordance with the City of Phoenix Traffic Barricade Manual, latest edition, the approved Traffic Control Plan, and directives by the Engineer will result in suspension of work and/or civil sanctions until deficiencies are corrected to the satisfaction of the Engineer.

Safety Fencing Requirement for Trenches and Excavations

The Contractor will provide safety construction fencing around all open trenches and excavations during all non-working hours.

The Contractor will provide for the safety and welfare of the general public by adequately fencing all excavations and trenches that are permitted by the Engineer to remain open when construction is not in progress.

Fencing will be securely anchored to approved steel posts located six feet on centers, having a minimum height of six feet, and will consist of wire mesh fabric of sufficient weight and rigidity to adequately span a maximum supporting post separation of six (6) feet.

The fencing, when installed about the periphery of excavations and trenches, will form an effective barrier against intrusion by the general public into areas of construction. Fencing will not create sight distance restrictions or visual obstructions. At all times when construction is not in progress, the Contractor will be responsible for maintaining the fencing in good repair, and upon notification by the Engineer, will take immediate action to rectify any deficiency. Prior to the start of any excavating or trenching required for the execution of the proposed work, the Contractor will submit to the Engineer for approval, detailed plans showing types of materials and methods of fabrication for the protective fencing.

There will be no separate measurement or payment for furnishing, installing, or maintaining

protective fencing. The cost will be considered incidental to the cost of the pipe and/or structures.

20. **401 TRAFFIC CONTROL**, Add the following to Subsection **401.10 PAYMENT**:

ALLOWANCE FOR UNIFORMED, OFF-DUTY LAW ENFORCEMENT OFFICER

This project includes a lump sum "ALLOWANCE FOR UNIFORMED, OFF-DUTY LAW ENFORCEMENT OFFICER. The amount of this allowance is determined by the Engineer, and is not subject to individual bid pricing. All bidders shall incorporate the amount pre-entered in the bid proposal and shall reflect the same in the total amount bid for this project.

Payment for uniformed, off-duty law enforcement officers shall be made from this allowance based on approved invoiced cost plus taxes, and a maximum 10 percent markup for overhead and profit.

TRAFFIC CONTROL

Payment for traffic control will be on a lump sum basis for Traffic Control Devices.

21. Add the following new **Section 402 ADDITIONAL CONSTRUCTION REQUIREMENTS** as follows:

402.1 FIELD DOCUMENTATION

The Contractor shall document existing conditions within the project area prior to construction. Documentation shall be video tape. The video tape shall not be made from a moving vehicle. One copy of the video tape shall be furnished to the City prior to the start of construction. The cost of the videotaping shall be considered incidental to the cost of the project. No separate measurement or payment shall be made for this item.

402.2 CONTRACTOR COMMUNICATION INFORMATION

The Contractor shall provide a pager and mobile phone to his on-site Project Superintendent to ensure that the Engineer can reach the Contractor's Superintendent. This pager and mobile phone must be accessible by local land-line telephone service. The Superintendent's pager and mobile phone shall remain in service for the duration of the project, and these phone numbers shall be included on the Contractor's list of emergency phone numbers submitted at the pre-construction conference.

402.3 TRENCH PLATING

In paved areas where vehicles will be driving over trench plating, the plates shall be set to match flush with existing pavement on all sides. Setting plates on top of the pavement surface and installing temporary asphalt ramps around them will not be allowed.

402.4 TRENCHING IN RIGHT OF WAY

The Contractor shall not be allowed to stockpile trench material or store any equipment other than the mainline track hoe within the right-of-way of Happy Valley Road from 67th Avenue to 35th Avenue. The Contractor shall secure temporary 6' chain link fence around the track hoe during non-working hours.

402.5 MAXIMUM OPEN TRENCH

No more than 330 linear feet of open trench shall be allowed on Happy Valley Road from 67th Avenue to 35th Avenue. Trenches across driveways shall be plated to maintain access. The cost of these plates shall be considered incidental to the project.

402.6 CAST-IN-PLACE PIPE RESTRICTION

Cast-in-place pipe shall not be allowed as an alternate in Happy Valley Road from 67th Avenue to 35th Avenue (Station 10+00 to Station 210+00).

402.7 POWER BROOM

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 shall clean the requested areas with a power pick-up broom.

Use of the power pick-up broom in the special requested areas only shall 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.

402.9 PUBLIC INFORMATION SERVICES

The City of Phoenix shall provide a public information specialist for the community relations program on this project.

The Contractor shall cooperate with the City's public information specialist firm in the preparation of newsletters, advanced notification for service disruptions, answering questions from the public, etc. He shall also provide schedule update information to the specialist.

The Contractor shall provide representatives as needed for all meetings with the public through out the contract period.

The City will pay public information service costs associated with approved contract time extensions; however, if the Engineer determines that delays were caused by the Contractor, the additional costs for public information services shall be deducted from the Contractor's final pay request.

402.11 POLLUTION AWARENESS MARKERS

Pollution Awareness Markers (PAM's) shall be installed by the Contractor for all new catch basins and for each existing catch basin within the project limits that does not have a PAM. The PAM's will be supplied to the Contractor by the City. PAM's shall be installed at the location identified by the Engineer. For existing catch basins, flat PAM's will be supplied, and the contractor shall clean the surface with a wire brush, apply appropriate adhesive to the back of the marker, and apply the marker to the clean surface. For new catch basins, PAM's with feet will be supplied, and the Contractor shall install them as the catch basin is cast.

22. **430 LANDSCAPING**, Add the following to **Subsection 430.3 PLANT ESTABLISHMENT GUARANTEE AND MAINTENANCE** and **Subsection 430.15 MEASUREMENT AND PAYMENT**:

430.3 PLANT ESTABLISHMENT GUARANTEE AND MAINTENANCE

Prior to final acceptance of the landscaping, the Contractor shall provide the City of Phoenix Parks, Recreation & Library Department with all water and electrical account numbers and billing information. Final acceptance will not be granted until this information is given to the Accounting Division of the Parks Department at 200 West Washington Street in Phoenix, (602) 495-5191.

430.15 MEASUREMENT AND PAYMENT

Measurement and payment for plant establishment guarantee and maintenance shall be on a

monthly basis for acceptable landscape maintenance under the bid item "PLANT ESTABLISHMENT GUARANTEE AND MAINTENANCE". No payment shall be made for unacceptable maintenance. When acceptable corrections have been made for the monthly inspection, the monthly payment will be released. Upon final acceptance, the final monthly payment will be made.

23. 430 LANDSCAPE, Add the following to Subsection 430.2 GENERAL:

Submittals: Within 14 days of a Notice to Proceed, submit certificates for landscape materials that meet the following criteria:

(A) Certificate of Inspection shall be submitted with shipped materials.

(B) Before delivery, Certificates of Compliance shall be submitted, certifying that materials meet the specified requirements.

(C) Certified copies of the reports for the following materials shall be submitted:

- a. Transporting of Cacti and Protected Plants (from the Arizona Department of Agriculture).
- b. Soil Amendments, Fertilizers, and Conditioners

(D) For commercially produced products, submit other data certifying that materials comply with specified requirements.

The Certification shall indicate: supplier's name, address, telephone number, date of purchase, name and technical description of the item purchased, and quantity of each item purchased. Material samples shall be forwarded in a single package to the Engineer within three (3) weeks after the Notice to Proceed. Soil test results, if required, shall accompany the samples of the materials.

The Engineer reserves the right at any time to take and analyze samples of materials for conformity to this section and the special provisions. The Contractor shall furnish samples upon request. Rejected materials shall be immediately removed from the project at no additional cost to the agency. The cost for removing installed materials that have been subsequently rejected shall be the responsibility of the Contractor.

Water: Unless specified otherwise, water used to complete the plant salvage, nursery storage, landscaping, turf or sod, native seeding, maintenance, and plant establishment work shall be from a potable source. The cost of water used for the landscape activities, from the project initiation until the Contractor's Plant Establishment Period responsibilities have been fulfilled, shall be the Contractor responsibility, whether an on-site source/meter is or is not used.

Upon written acceptance of the Plant Establishment Period activities, the Contractor shall arrange with the Engineer to transfer any installed on-site water meters to the City.

24. 430 LANDSCAPE, Add the following to Subsection 430.7 NATIVE SEED:

Native seeding shall consist of furnishing all materials, preparing the seedbed, applying equal distribution of seed, and establishing the seeded areas. Native seeding shall be accomplished in two stages. The first stage shall consist of soil preparation, furnishing and applying the seed, and furnishing and applying the wood fiber mulch. The second stage shall consist of a maintenance and stabilization period, during which time the Contractor shall be responsible for maintaining and stabilizing the seeded and mulched areas and restoring damaged or eroded areas until conclusion of the establishment period and acceptance by the Engineer.

Documentation of the seeding materials shall be submitted to the Engineer prior to the start of the scheduled native seeding activity, per Section 795. No materials shall be delivered to the site until approval has been received.

The species, variety, and/or strain of seed shall be specified as indicated in Table 430-1. The Contractor shall submit written documentation from the seed supplier, on their letterhead, confirming that the source(s) for the contract-specified seed has been secured and that all seeds have been stored under dry conditions, out of direct sunlight, and at temperatures between 35 to 120 degrees F.

Seed substitution requests shall be made via written request to the Engineer for review and approval. Any proposed substitution seed shall be of equal value and match (or closely mimic), the original mature plant characteristics, such as color, growth habit, and known to grown in the project area.

No substitution of seed mix will be allowed unless Contractor shows documentation from at least three (3) seed suppliers that the seed is not available in time for the seeding effort, per the project construction schedule.

TABLE 430-1 Native Seed Mix		
Botanical Name	Common Name	PLS Rate ⁽¹⁾ (Pounds Per Acre)
Ambrosia deltoidei	Triangle-leaf Bursage	1.0
Aristida purpurea	Purple Three-awn	2.0
Baileya multiradiata	Desert Marigold	1.5
Bouteloua aristidoides	Needle Grama	0.5
Encelia farinosa	Brittlebush	1.5
Eschscholtzia Mexicana	Mexican Poppy	1.0
Lesquerella gordonii	Gordon's Bladderpod	0.75
Phacelia crenulate	Arizona Desert Bluebells	1.0
Plantago ovata	Desert Indian Wheat	1.0
Senna covesii	Desert Senna	1.5
Sphaeralcea ambigua	Desert Globemallow	1.0
Sporobolus cryptandrus	Sand Dropseed	0.10
⁽¹⁾ Application rates of seed are for Pure Live Seed (PLS). PLS is determined by multiplying the sum of the percent germination of seeds, including hard or dormant seeds, by the percent purity.		

430.7.1 Seed Bed Preparation: The Contractor shall stake out all areas to be seeded and obtain Engineer's approval prior to beginning work.

All seeded areas shall be tilled to an average three to four (3-4) inch depth by disc harrow, chiseling tool or with other approved equipment. Tillage shall be done along the contours of the slope, and the ground shall be ripped in two perpendicular directions unless relief from this requirement is authorized by the Engineer. No work shall be done when the moisture content of the soil is unfavorable, or the ground is otherwise in a condition not conducive to tillage. Slopes steeper than 2 horizontal to 1 vertical are not required to be tilled or ripped. Slopes flatter than 2 horizontal to 1 vertical shall be left with a roughened surface to aid in water absorption. All competitive vegetation shall be uprooted during the tillage operation. Seeded areas shall be left with a firm surface free of large stones over 1-inch in any dimension and other foreign material that would interfere in the seeding operation. Discarded stones and debris shall be removed from the site or, at the sole

discretion of the Engineer, may be collected and redistributed on the finished grade at designated locations.

Prior to seeding, the soil surface shall be loose but not wet. Seeding shall be done immediately following the final preparation of each seedbed area, which may involve preparation, mobilization, and seeding of distinct portions of the site separately as agreed to by the Engineer. The intent is that no measurable rainfall shall have occurred on these areas between the ground preparation and the seeding operations. If the ground surface becomes encrusted prior to placing native seeds, the Contractor will be required to loosen the surface until acceptable. Hoses may be used to seed project areas where heavy equipment cannot access. Scheduling of seeding mobilization will be coordinated with the Engineer at the construction meetings, or more frequently as requested. The Contractor shall demonstrate prior to starting the seed installation his proposed method for the seedbed preparation, recognizing the site conditions and these specification requirements, and make modifications during the work as directed by the Engineer. The Engineer shall approve the seedbed preparation and establish the acceptable preparation methods for the project.

430.7.2 Seeding: Obtain the Engineer’s approval of the seedbed preparation areas prior to seed application. Apply slurry in a sweeping motion to form a unified mat of specified materials. Use the hydromulch material as a guide in applying the slurry. Do not cause rivulets, erosion, or changes to the finished grade. Wash, clean or remove overspray as directed by the Engineer.

The slurry for the hydroseed process shall be in accordance with Table 430-2:

TABLE 430-2 Hydroseed Application Rates	
Slurry Mix	Rate (Pounds per Acre)
Commercial Fertilizer: (16-20-0 analysis) or approved equal	300
Hydromulch: 100% wood fiber or equivalent	2,000
Tackifier 200 Seed mix:	100

The seed shall not be combined with the slurry mix for more than 30 minutes prior to use.

The Engineer may observe the weighing of seed, mixing of slurry mixes, and application of seed. The Contractor shall coordinate with the Engineer in advance so these operations can be observed on a regular basis.

The Contractor shall submit a batch (tank) mix for the Engineer’s approval prior to mixing any seed/mulch slurry. Batch mixing and coverage will be monitored throughout seeding operations. The slurry shall be anchored by tackifier incorporated into the slurry at the rates specified above.

Any material sprayed on non-designated areas shall be immediately removed at the Contractor’s expense. Non-designated areas may include, but are not limited to, do not disturb areas, structures, walls, fences, pavement, roads, trails/paths, signs, trees, plants, site furnishings, and equipment.

430.7.3 Cleanup and Protection: During native seeding work, keep work areas clean and in an orderly condition. Broom, scrub, or hose affected areas as directed by Engineer to maintain a clean and neat work area.

Promptly remove soil and debris created by seeding work from paved areas. Clean wheels of vehicles prior to leaving site to avoid tracking soil onto surfacing of roads, walks or other paved areas.

Treat, repair, or replace damaged work during the installation as directed by the Engineer, at no

cost to the project. Remove all debris, trash, and excess materials generated by the seeding installation.

25. Add the following new **SECTION 431 SAGUARO, TRANSPLANTING:**

Description:

The work under this item consists of the salvaging, transporting and replanting of all designated Saguaros to be salvaged and replanted as a move once operation.

The designated Saguaros shall be salvaged, transported, and replanted in the final location as shown in the Project Plans. The work shall also include the machinery, equipment, labor and materials required to provide and supply temporary irrigation water to the salvaged saguaros at the final planting location; excavating and backfilling; documenting, measuring, and inspecting salvaged saguaros as identified herein; the mixing and applying of chemical solutions, fertilizers and amendments; hauling the salvaged saguaros to their final location and replanting the salvaged saguaros, including furnishing all labor, material, equipment, and safety control devices to dig, lift, transport salvaged saguaros to their final location from their original location; warranty of workmanship; bracing, guying, staking, and wrapping; the cleanup of the area, disposal of unwanted and deleterious materials, and the care and maintenance all in accordance with the details shown on the project plans and the requirements of the specifications.

Materials:

The backfill (prepared soil) for planting the saguaros shall conform to the requirements of these Special Provisions.

(A) Prepared Soil:

Three to four pounds of soil sulfur shall be uniformly mixed into each cubic yard of prepared soil or as needed to meet the requirements herein.

Soil sulfur shall be in powdered form, agricultural grade, containing 90% sulfur and 10% inert ingredients.

It is the intent of this Special Provision to utilize existing soil removed from the plant pit, amended with soil sulfur, for backfilling of the plant pits. Excavated material shall be considered useable for prepared soil provided it meets the requirements herein. Prepared soil shall be free of any deleterious material and contaminants.

Large rocks shall not be buried in the plant pit but may be wasted on the site by the contractor as approved by the Engineer. Large soil clumps shall not be used to support the plants or be permitted in the planting pit.

If the existing material removed from the plant pit results in a deficient soil quantity to fulfill the backfill quantities as required, the contractor shall collect and prepare additional existing surface soil to fulfill the quantities necessary to complete the work, at no additional cost to the City. The additional soil shall be collected from within the clearing limits of the project site as approved by the Engineer.

Soil from sites with noxious and invasive weeds shall not be used unless it can be shown that it was acquired from a depth of 6 feet or more.

(B) Water:

Water used during plant salvaging and to properly plant, maintain and care for the salvaged

saguaros throughout the term of the contract shall be furnished by the contractor. It shall be the contractor's responsibility to secure an approved water source and any necessary permits and approvals.

(C) Hardware:

All hardware materials used for salvage and replanting shall be as approved in the Salvage Operations Plan.

Hardware materials shall include but not limited to fasteners and posts; bracing and guying materials; shade screens, liners and fabrics; and calibrated measuring materials and devices.

Shade screens in physical contact with cactus shall be made of burlap, hemp or other breathable fiber material as approved by the Engineer.

All water distribution materials shall comply with MAG Specifications and the City supplement to the MAG Standard Specifications.

Construction Requirements:

The backfill (prepared soil) for planting plant materials shall conform to the requirements of these Special Provisions.

(A) General:

The contractor performing the saguaro salvage and transplant work shall have a minimum of 8 years' experience in relocating native plants and cacti similar to those shown in the project plans and project specifications.

The contractor performing the work shall meet the following requirements and shall submit the necessary written documentation to the Engineer at a preconstruction conference prior to construction as herein specified:

- (1) Must be an Arizona licensed landscape contractor in good standing.
- (2) Submit a list of a minimum of five native plant salvaging and relocation projects satisfactorily completed. The list shall include the dates of the project work, type of equipment used, description of the project and work performed, the name and phone number of a contact person representing the agency, company or owner for which the work was complete.
- (3) It is desirable to have project records of successful Saguaro replanting and survival of at least 80% for 3 years after replanting, a list of these projects should be submitted to the Engineer for review and approval.
- (4) Submit a list of the contractor's key personnel (minimum one) who will supervise and perform the actual relocation operations. The person listed shall be on site and in responsible charge during all operations. This list shall be accompanied with resumes for all key personnel. The resumes shall include at the minimum the following information and demonstrate compliance with any requirements requested: Level of and number of years of applicable training/ experience, Detailed work experience including work performed, Equipment operated, Dates of work and work references (one project minimum), Specialist skills or equipment qualifications, degree of participation on actual projects listed in (2) above or other projects similar to (2) above. Any substitution of key personnel will need to meet the requirements under this section and need prior review and approval by the Engineer.

The Engineer reserves the right to reject at any time the contractor based on the review of the qualifications statement and/or performance of the work herein.

All applicators of pesticides and herbicides shall have a current and valid applicator's card from the State of Arizona Structural Pest Control Commission.

The contractor shall submit a Salvage Operations Plan for the review and approval of the Engineer prior to the beginning of any ground-breaking work by the contractor. The Salvage Operations Plan shall be contained in a three-ring binder(s) and shall be typed on 8 1/2 inch x 11 inch sheets. The contractor shall submit three copies of the Salvage Operations Plan to the Engineer at the pre-construction meeting. The creation of the Salvage Operations Plan is considered a non-pay item with the cost being considered included in price of the Saguaro, Transplanting item.

The Salvage Operations Plan shall contain as a minimum the following items and the plan shall conform to the details shown on the project plans and these Special Provisions:

- The Salvage Operations Plan shall clearly demonstrate how the contractor's salvage operations methods and approach will be accomplished from April 1 through September 30.
- The Salvage Operations Plan shall clearly demonstrate that the Salvage Contractor will have adequate staff and equipment to be able to remove, transplant, and replant designated cacti within the specified salvage period. As much of the root system as possible should be removed and replanted.
- Methods for coordinating the salvage and replanting of all salvaged plant material with anticipated phasing and sequencing of construction per stationing limits.
- Final location of each salvaged plant material (if different than shown on the plans).
- Identification numbers of each salvaged plant material.
- List of mechanical and hand equipment to be used to accomplish all salvaging and planting work.
- Shop drawing(s) of all transport bracing and cradle details.
- Final plant bracing shall be per the details in the project plans.
- A description (in detail) of the hardware and materials, salvaging and replanting procedures and transporting methods plus all other methods to accomplish all salvaging work as per the project plans.
- A section within the plan that identifies the "Watering Plan." The Watering Plan shall include applicable drawings, materials and equipment, details and documentation to demonstrate how the protected in place plant material and salvaged and relocated plant material will be watered from the initiation of the project activities through the end of the construction period. The Plan shall clearly state how the Contractor will achieve a deep watering capable of reaching the root zone of the cacti and how that will be verified in the field. The Plan shall identify the source of water; its capability to deliver water in sufficient quantity to meet the project needs; the proposed layout of piping for delivering water from the source to the stored and replanted plants; the total quantity of water anticipated to be used on the project; monthly estimates of water consumption by species type (in the field-boxed and replanted condition) including, at a minimum, a breakout of monthly adjustments for seasonal conditions; and protection of the watering method from damage by animals, insects and/or other detrimental conditions. Transplanted cacti roots should be kept dry for a two-week period after replanting.

The Engineer will be the sole judge of the acceptability of the recommendations within the Salvage Operations Plan and will notify the contractor within 21 days of the acceptability of the plan.

The landscape plan identifies by location each saguaro to be salvaged or protected in place.

With the Salvage Operations Plan, the contractor shall submit five copies of a list of all materials and equipment proposed for incorporation into the work. The contractor shall have materials and equipment correctly marked on each copy of the list. The list shall show the catalogue numbers, manufacturer's names, model numbers, sizes, capacity, complete specifications, instructions, design data and/or drawings to determine whether each piece of material or equipment is acceptable.

No vehicles, equipment and machinery required to perform the salvage work shall trespass outside the boundaries of the clearing limits or planned access routes approved by the Engineer.

Transporting of salvaged plant material for the project shall comply with all State and local requirements. The contractor shall be responsible to obtain all necessary permits and tags for transporting salvaged plant material on public roadways; no separate payment will be made to the contractor for the permits. Permits and tags shall be made available to the Engineer upon request.

The contractor shall provide adequate water to each plant to maintain optimum health from the initiation of the salvaging operations until completion of the project, as determined by the Engineer.

Calibrated measurements of Saguaros shall occur at the following times during the duration of the work:

Calibrated Measurements for Saguaros:

Calibrated measurements for salvaged plant material moved once (from original location to the final plant location) shall occur once prior to their removal from their original location and once every four months thereafter in its final location.

All calibrated measurements for Saguaros will be completed and documented monthly in writing by the contractor. The contractor shall document and record all initial and monthly Saguaro measurements, dates, salvage plant material identification number, corresponding photograph(s), final transplanted location by station and offset and a remarks column. This documentation shall be kept on file at the job site by the contractor and copies presented to the Engineer upon completion of initial measurements and all other required measurements thereafter throughout the duration of the work. Forms shall be submitted to the Engineer monthly for review and approval.

Calibrated measurements shall be completed by methods and tools approved by the Engineer. The method shall demonstrate that the original points of measurement will be easily located with pinpoint accuracy when future measurements are made throughout the duration of the contract. The minimum acceptable measurable distance of displacement between original points of measurement and all future measurements shall be 1/8 inch. The recorded calibrated measurements, photographs and visual inspections will be used as tools and methods by the Engineer to determine if the health and/or vigor of the Saguaro is in reasonably close conformity to the appearance it displayed prior to its initial removal and transplant.

Damage or destruction of any plants to be salvaged during the contractor's pre-construction and construction activities shall be replaced with like-kind plants as approved in advance by the Engineer. Damaged plants shall be replaced at no additional cost to the Department.

(B) Excavation:

The excavation and removal for all Saguaros shall be accomplished in accordance with the Salvage

Operations Plan method as approved by the Engineer. The method shall demonstrate that the excavation process for the Saguaros will provide the minimal acceptable root lengths as specified herein; locate and expose the roots without damaging the local stock with the equipment or machinery used for the excavating; expose the roots to appropriate lengths using hand tools prior to cutting the roots.

Final cuts to salvaged roots during transplanting shall be accomplished to provide the minimum acceptable root lengths using lopping shears, pruning saw and/or by the method approved in the Salvage Operations Plan. After the final cut, the remaining root attached to the salvage plant shall be structurally intact with no signs of splintering or shredding.

Saguaro's shall not be excavated, transported or removed during rainy weather conditions as determined by the Engineer. This work may resume with the written approval by Engineer.

Final cuts to Saguaro roots less than 1 inch in diameter shall leave the attached roots with a minimum length 3 inches from the buttress of the trunk or lateral support root. Saguaro roots greater than 1 inch in diameter shall leave the attached roots with a minimum length of 12 inches from the buttress of the trunk or lateral support root. Buttress roots greater than 3 inches in diameter shall leave the attached roots with a minimum length of 24 inches minimum root length from buttress or lateral support root. To achieve the proper root length, Saguaro excavation shall commence no closer than 5 feet from the trunk of each plant.

The contractor shall show in their schedule and notify the City within 48 hours on which day any cacti will be excavated to allow for the opportunity for inspection of the root ball condition and supplemental pruning.

All wounds and/or cuts made to the roots shall be treated with powdered sulfur or bactericide on the same day that the cut and/or wound was made.

(C) Shipping and Handling Plants:

Saguaros 7 feet in height and taller shall require bracing and protection during removal and transportation that is capable of reasonably eliminating harmful twisting and bending of the Saguaro's trunk and/or arms during each removal and transport by the contractor. The use of styrofoam and/or similar materials is required to support saguaro arms 3 feet or longer. The Salvage Operations Plan as approved by the Engineer will represent the materials and methods required to appropriately brace, protect, remove, and transport all salvage plant material. The methods and/or materials shall not damage and/or mar the surface or internal structure of any salvage plant material.

(D) Planting:

All salvaged saguaros shall be replanted at their original growing depth to not more than 2 inches deeper than their original growing depth. The root collars of all salvaged saguaros transplanted deeper than their original growing depth shall be in a callused condition.

Soil from sites with noxious and invasive weeds shall not be used.

Plant pits shall not be allowed to be flooded and totally saturated. Water shall not be used to accomplish soil compaction around the root ball.

The contractor shall adequately water plants to maintain a healthy and vigorous growing condition during the planting period, as determined by the Engineer.

Apply prepared soil in lifts not exceeding more eighteen inches of material per lift. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat

watering until no more water is absorbed.

Prior to planting salvaged saguaros on fill slopes the contractor shall partially backfill and compact the planting pit with prepared soil.

The contractor shall supply, install and compact any prepared soil lost due to settling.

Root length requirements stated herein are the minimum. Careful planning shall be practiced during the excavation and root selection process for all local stock to ensure that the remaining roots will supply a structurally sound foundation.

All Saguaros are to be replanted in the same solar orientation and as near as possible to their vertical growth habit found prior to their initial removal and transport.

Saguaros will require a thorough application of agricultural streptomycin bactericide or powdered sulfur to the roots of the stock. Local and/or collected/open stock treated with the streptomycin bactericide shall also be required to be planted in dry site soil in its temporary and/or final location. The surrounding soil shall be kept dry for a minimum period of 2 weeks. To increase stability of the installed plants, the Engineer may allow the plants to be watered within a few days of planting to compact the backfill.

(E) Staking:

Saguaros 7 feet in height and taller shall require bracing. The bracing shall sustain the local and/or salvage plant material in its vertical position. The contractor shall submit a materials list and shop drawings of the proposed bracing, herbivore protection, and/or supporting methods and include these items in the Salvage Operations Plan.

Bracing materials shall not cause conditions that may be detrimental to the plants over the life of the project (i.e., bruising or scarring the cambium layer or skin, providing opportunities for fungus and bacteria at the contact areas, etc.).

Wrapping and herbivore control are not required at the time of installation. However, the Engineer reserves the right to direct the contractor to install these items for each cactus replanted under this contract on a plant-by-plant basis. If directed, the contractor shall provide and install the items to the satisfaction of the Engineer.

It is the intent of these specifications that the bracing, wrapping, herbivore protection and supporting materials remain in place through project duration. However, at substantial completion, the Engineer will evaluate the condition of the planted stock for stability and root growth and provide a status report within ten (10) working days to the contractor on the results of that evaluation. Removal of all bracing and/or supporting materials at any time during the project shall be at the contractor's discretion. These materials shall become the property of the contractor and be removed and disposed of off the project site.

Method of Measurement:

Item M4309820 Saguaro, Transplanting shall be measured on a per each basis.

Item M4309800 Cacti, Transplanting shall be measured on a per each basis.

No measurement will be made for any water use associated with the salvage operations and is considered incidental to these efforts.

Basis of Payment:

Item M4309820 Saguaro, Transplanting measured as provided above, will be paid on a per each basis, which price shall be full compensation for the work, complete in place, including, bracing, wrapping, herbivore protection, planting the saguaros, and watering the saguaros, as described and specified herein and on the plans and details.

Item M4309800 Cacti, Transplanting measured as provided above, will be paid on a per each basis, which price shall be full compensation for the work, complete in place, including, bracing, wrapping, herbivore protection, planting the saguaros, and watering the saguaros, as described and specified herein and on the plans and details.

Payment for all salvaged cacti and saguaros will be made at the contract unit price, which price shall be full compensation for the work complete, as described and specified herein and on the project plans. This includes pruning and trimming of roots, excavating planting pit transplanting salvaged saguaros to their final location, replanting the saguaros, watering the saguaros, providing and installing herbivore protection, tagging or retagging of salvaged saguaros, and wrapping the saguaros as described in these specifications.

The contractor shall obtain the Engineer's approval prior to providing and installing any saguaro replacements as described herein.

No measurement or direct payment will be made for the preparation and necessary modifications to the Salvage Operations Plan as described herein. The work is considered incidental to the contracted items.

No measurement or direct payment will be made for the prepared backfill soil, the soil amendments, the acquisition of, storage of, or placement of the prepared backfill soil in the planting pits, the costs associated with this effort are considered to be incidental to the salvage and replanting items.

No measurement or direct payment will be made for the use of specialized equipment required to gain access to, perform salvage or replanting operations, or for the transportation of the salvaged saguaros from their point of salvage to the final planting site, or any special permits for the plant or transportation thereof, the cost of which shall be considered incidental to the salvage and replanting items.

No measurement or direct payment for any reason will be made by the City for plant materials salvaged by the contractor beyond the material identified on the plans for his/her own use and benefit.

No measurement or direct payment will be made for work involving excavation and salvaging of substitutions not approved in writing by the Engineer or for materials not identified in the Salvage Operations Plan.

No measurement or direct payment will be made for any plant protection required from herbivore damage installed as part of the project, the cost of which is considered incidental to the contracted items.

No measurement or direct payment will be made to the contractor for the removal and disposal of any salvaged plant materials determined as unacceptable by the Engineer.

No measurement or direct payment will be made for eradication of unwanted plant growth, and maintenance of plants during construction phase, the cost being considered incidental to the contracted items.

26. **440 LANDSCAPE IRRIGATION SYSTEM INSTALLATION**, Add the following to **Subsection 440.6.6 VALVES, VALVE BOXES, AND SPECIAL EQUIPMENT:**

SOLAR COMPATIBLE VALVES AND ASSEMBLY:

The solar compatible valves and assembly shall be designed to operate compatible with the solar controllers as described on the plans and in the special provisions for the project. The valves shall be bronze.

Measurement shall be per each solar valve and assembly furnished and installed, and payment shall be made under the bid item, "SOLAR VALVES AND ASSEMBLY".

27. **440 LANDSCAPE IRRIGATION SYSTEM INSTALLATION**, Add the following to **Subsection 440.6.8 CONTROLLER SYSTEM:**

SOLAR CONTROLLER:

The solar controllers shall be light energized 8 station irrigation control computers with lockable, environmentally sealed, vandal resistant cases. The controllers must have an operational and storage temperature range of 14 degrees F. to 158 degrees F.

The controllers shall not require any AC power, circuit breakers or transformers. The power for the display shall come from a 9-volt alkaline battery capable of energizing the crystal display during programming. The solar controllers shall be capable of energizing solar compatible valves at a rate of 40 mS pulse at 3.5 volts DC.

The solar controller shall have a user defined emergency back-up program which does not require additional batteries and has a non-erasable memory.

The solar controller shall have a 5-year no hassle replacement warranty.

Measurement shall be per each solar controller furnished and installed, and payment shall be made under the bid item "4 – 6 STATION SPRINKLER CONTROLLER, SOLAR POWERED, WITH SECURITY CABINET".

28. Add the following new **Section 472 TRAFFIC SIGNAL FOUNDATIONS** as follow:

472.1 DESCRIPTION:

The work under this section shall consist of furnishing all materials and constructing all traffic signal support foundations and other designated pole foundations, as well as cabinet and electrical service pedestal foundations for the traffic signals in accordance with the locations and as shown on the Foundation Sheets of the Approved Traffic Signal Plan and details designated on the COP Traffic Signal Standard Details, and ADOT Standards. Foundations shall include all conduits, conduit elbows, anchor bolts, reinforcing steel, grounding electrode, and other embedded appurtenances.

The controller and power service pedestal cabinet foundations shall conform to the requirements of COP Traffic Signal Standard Details.

472.2 MATERIALS:

472.2.1 General: Certificates of Analysis including description of material supplied, quantity represented by the certificate, means of material identification (such as label, lot or marking), statement the material complies with the requirements of the cited specification, name, title and signature of person having authority to bind the manufacturer or supplier of the material, and results

of tests required by the specification shall be submitted for all structural steel and high-strength bolts.

472.2.2 Excavation and Backfill: Trenches shall not be excavated wider than necessary for the proper placement of conduit and pull boxes. Trenching, backfilling, and compaction shall be done in accordance with Section 601. All excavations within the roadway shall be backfilled and compacted in accordance with Section 206.

472.2.3 Concrete: Concrete used for all foundations shall be MAG class 'A', 3000psi, 4000psi or 5000psi concrete with a 4"-6" slump and shall be in accordance with the requirements of MAG Section 725, except as noted herein. All concrete shall have a maximum water/cement ratio of 0.45. Maximum aggregate size to be 1 1/2".

472.2.4 Anchor Bolts: Anchor bolts, nuts and washers shall conform to the requirements shown on Traffic Signal Details.

472.2.5 Reinforcing Steel: Steel bars used as reinforcement in concrete shall be deformed and conform to the requirements of ASTM A615, Grade 60.

472.2.6 Rebar Cage: The Rebar Cage is the assembly of the reinforcing steel and the Anchor Bolts as shown in the COP Traffic Signal Standard Details.

472.2.7 Electrical Conduit: All electrical conduit and conduit fittings shall be sized as shown on the Foundation Sheets of the Approved Traffic Signal Plan and in accordance with these specifications. All foundation conduits shall be grey Schedule 40 PVC.

472.2.8 Grounding Electrode: The grounding electrode shall be in accordance with these specifications and COP Traffic Signal Standard Details.

A 25-foot coil of #4 AWG stranded bare copper grounding electrode shall be installed at the base of the pole foundations and extend centered, two feet above the top of the foundation.

Service pedestal foundations shall have 1-inch PVC ground rod sleeve and a 5/8-inch x 10-foot bonded copper grounding rod driven into the ground prior to the power pedestal foundation being poured. The ground rod shall protrude 6 inches above finished grade of the power service foundation.

472.3 CONSTRUCTION REQUIREMENTS:

472.3.1 Utility Potholing: When underground utility conflicts are revealed by blue stake or shown on the plans, the contractor may be required to conduct Utility Potholing for Conduit runs or Foundations as directed by the COP Traffic Signal Engineer or designee.

472.3.2 Excavation and Backfill: Foundations will be placed in different soil conditions requiring drilling in normal soil conditions or hard soil such as in rock or caliche; or soft digging to identify and avoid utility conflicts.

The excavations required for the installation of foundations and other items shall be performed in such a manner as to avoid any unnecessary damage to streets, sidewalks, landscaping and other improvements. Any damage by the contractor's operation shall be replaced or reconstructed where determined by the COP Traffic Signal Engineer or designee at the expense of the contractor. The foundations shall not be excavated wider than necessary for the proper construction of the foundations and other equipment. Excavation shall not be performed until immediately before construction of foundations. The material from the excavation shall be placed in a position that will minimize obstructions to traffic and interference with surface drainage. All surplus excavated

material shall be removed and properly disposed of within 48 hours by the contractor, as directed by the COP Traffic Signal Engineer or designee. After each excavation is completed, the contractor shall notify the Signal Shop designee for inspection. Under no circumstances shall any underground materials or equipment be covered with fill without the approval of the COP Traffic Signal Engineer or designee.

At the end of each working period, all excavations shall be barricaded or covered, or both, to provide safe passage for pedestrian and vehicular traffic.

Excavations in the street or highway shall be performed in such a manner that not more than one traffic lane is restricted at any time, unless otherwise provided in the Special Provisions.

Sidewalk and pavement excavations shall be kept well covered and protected to provide safe passage for pedestrian and vehicular traffic until permanent repairs are made.

472.3.3 Installation: The elevation of signal pole foundations shall be set as follows unless otherwise noted within the construction plans or special provisions. Signal pole foundations shall be set flush ($\pm 1/4$ ") with the existing or new sidewalk when sidewalk is present. Where curb exists without sidewalk, the foundations shall be set flush with a surface defined by a 1.5% upward slope from the top of curb ($\pm 1/2$ "). Where there is no curb or sidewalk pole foundations shall be as shown on the project plans. The dimensions and locations of foundations shall be as specified on the project plans; however, the COP Traffic Signal Engineer or designee may direct that changes be made in locations due to obstructions or other existing conditions. Any change in locations shall be documented by the contractor on as-built traffic signal plans. The contractor shall verify top of foundation elevations with the COP Traffic Signal Engineer or designee prior to foundation construction.

Anchor bolts shall be oriented such that the bolt pattern sides are both parallel and perpendicular to the roadway centerlines unless otherwise specified on the Approved Traffic Signal Plan. Anchor bolts, conduit and rebar cage shall be centered within the foundation, set at the specified height and plumb within $\pm 1/2$ degree. During placement of concrete, anchor bolts shall be securely held in proper alignment, position, and height with a suitable template.

A 25-foot coil of No. 4 AWG bare copper conductor shall be installed 4" below the foundation and covered with 4" of fill material such that no part of the coils will be in contact with the concrete foundation. An extension of the No. 4 AWG bare copper wire shall extend into the pole.

Installation of anchor bolts shall ensure that when assembled, all joint surfaces including those adjacent to the washers, shall be free of scale, except tight mill scale, and free of foreign material or debris. If bolt pretension or installation torque requirements are not specified in plans, anchor bolts are permitted to be installed to only the snug-tight condition. The snug-tightened condition is the tightness that is attained with a few impacts of an impact wrench or the full effort of an ironworker using an ordinary spud wrench to bring the connected plies into firm contact.

After excavations are completed and anchor bolts, reinforcing, ground wire, and conduit installed, the Contractor shall notify the Signal Shop designee for inspection. Under no Circumstances shall concrete be placed without approval of the COP Traffic Signal Engineer or designee.

472.3.4 Construction: Concrete shall be placed in holes which have been augured against undisturbed earth. If the material in the bottom of the hole is not firm and stable, it shall be compacted or treated as directed by the COP Traffic Signal Engineer or designee. The walls and the bottoms of the holes shall be thoroughly moistened prior to placing concrete.

If the soil is not stable, a deeper foundation than specified may be required or forms shall be used as determined by the COP Traffic Signal Engineer or designee. The forms shall be of the proper size and dimensions and shall be rigid and securely braced. Foundation forming material shall

extend no more than 20 inches below the foundation final grade and shall be removed after placement and curing of concrete. The concrete pour shall be continuous and consolidated by means of vibrators. All exposed surfaces of the foundation shall receive a finish that is smooth, level, and free of form marks.

Type 'A', 'AP', and 'BP' pole foundations, cabinet foundation, and service pedestal foundation shall set for a minimum of five (5) days prior to installation of poles and/or cabinets. All other pole foundations shall set for ten (10) days or until concrete cylinder breaks reach a minimum of 3000psi prior to installation of poles. Either at the request of the City or the contractor, higher strength concrete can be used to accelerate the installation of Traffic Signal poles with the approval of the COP Traffic Signal Engineer or designee. If used, concrete cylinder breaks must reach a minimum of 3000psi prior to installation of poles. If requested by the City, contractor will be compensated for the additional cost of the higher strength concrete based on the volume of concrete used for the foundation.

472.3.5 Foundation Grounding Testing: A ground resistance test shall be performed for each installed ground rod prior to final connection of the utility service. Pole foundation coil grounds shall be tested as determined by the Engineer or designee in the field.

The ground resistance shall be measured with a three terminal, fall of potential, direct reading, battery powered earth tester with a 0.50 to 500 ohm scale or digital read-out. The 25 ohm reading shall be approximately at mid scale.

The test shall be performed according to the manufacturer's instructions and OSHA requirements. Two auxiliary copper clad ground rods shall be driven into the ground a minimum of 3 feet. The lateral spacing for each test rod shall be given in writing on the test report form and the spacing shall be approved by the Engineer or designee.

All tests shall be performed in the presence of the Engineer or designee and the test results shall be written down, dated, and given to the Engineer or designee for approval.

Each ground rod or foundation ground shall be isolated with the bond wires disconnected when the test is being performed. The resistance to ground shall be 25 ohms or less. If it is not, additional ground rods shall be installed as required at least 15 feet from the original ground and shall be bonded to it. The test shall then be repeated for multiple grounds as necessary to achieve proper grounding below 25 ohms. As many additional ground rods shall be installed as is necessary to achieve proper grounding of 25 ohms or less.

The test shall be performed when the soil is dry. The contractor shall not add any chemical or salt solutions to any portion of the grounding system. All grounding rods and foundation grounds to be tested shall be installed a minimum of ten days prior to testing unless otherwise determined by the Engineer or designee in the field.

472.4 MEASUREMENT:

Utility Potholing will not be measured for payment and will be considered included in the price for each foundation.

Foundations for traffic signal poles and cabinets will be measured as a unit for each type of foundation constructed by soil and avoiding utility conditions.

If requested by the City, higher strength concrete will be measured by cubic yard of concrete used in the foundation.

472.5 PAYMENT:

Payment shall be full compensation for the work, COMPLETE IN PLACE, including excavations, concrete, backfill, pothole surface material, and any incidentals necessary to complete the work.

The accepted quantities of foundations for traffic signal poles and cabinets measured as provided above, will be paid for at the contract unit price by type of foundation and soil condition. Payment shall be full compensation for the work, COMPLETE IN PLACE, including excavations, concrete, backfill, conduit within foundation, grounding system, grounding system testing, potholing, and incidentals necessary to complete the work. If requested by the City and authorized by the COP Traffic Signal Engineer or designee, the accepted quantities for higher strength concrete (4000psi or 5000psi) as measured above, will be paid under ALLOWANCE FOR EXTRA WORK in addition to the unit price for the foundation.

29. Add the following new **Section 473 DETECTORS** as follows:

473.1 DESCRIPTION:

The work under this section shall consist of furnishing and installing pedestrian detectors at the locations and sizes shown on the Approved Traffic Signal Plan and in accordance with the requirements of these specifications and the COP Traffic Signal Standard Details. Homerun Shielded Loop Detector Cable shall be installed and paid for under Electrical Conductors.

473.2 MATERIALS:

473.2.3 Pedestrian Detectors General Requirements: The standard required pedestrian detector shall be the Accessible Pedestrian Signal Detector as described below unless the plans specify a pedestrian push button. All pedestrian detectors shall be in accordance with the Americans with Disabilities Act Accessibility Guidelines (latest revision). Pedestrian detectors shall be installed as per COP Traffic Signal Standard Details.

473.2.3.1 Pedestrian Push Buttons: Standard pedestrian push buttons (bullnose) shall meet the following specifications:

1. Body and cover shall be cast aluminum using four (4) brass or stainless-steel Phillips head screws, #8 x 32 x 1", for securing the cover to the body.
2. Body and cover must have an industry standard bolt pattern and design to allow for retrofit of existing units in the field.
3. Body shall be without a sign mount and approximately three (3) inches in diameter.
4. Operation button shall be stainless steel two (2) inches in diameter, (large ADA), with a tamper-proof vandal resistant housing.
5. Operating switch shall be mechanical (no exceptions).
6. The switch shall be the phenolic-enclosed SPST-type with momentary contacts.
7. The switch shall operate in the normally open position.
8. The switch shall have screw-type terminals and shall have a rated life of not less than one million operations.
9. The contacts shall be rated at 15 amps and 125 volts AC.
10. Cover and body will be painted black. Powder coated will be accepted.
11. The body of each pedestrian push button assembly shall have a 1/2" to 3/4" hole located in the center of the base assembly. There shall also be two (2) 5/16" holes in the base assembly 1" above and 1" below the center point in the back of the housing.
12. Each base assembly shall have a curved back or be supplied with a "U" channel mounting bracket to facilitate the mounting of the assembly on round pole surfaces.
13. The mounting bracket shall be 2 1/2" long and 1 1/8" wide with 3/8" flanges on each side. Each mounting bracket shall have a 7/8" hole in the center of the bracket and 5/16" holes located 1" above and 1" below the center of the 7/8" hole.

473.2.3.2 Accessible Pedestrian Signal Push Buttons (APS): APS push buttons shall meet the following specifications:

A. General:

1. Conform to applicable sections of the current MUTCD Chapter 4E, Pedestrian Control Features as specified herein.
2. All features fully operational when the traffic signal is in stop-and-go mode.
3. All features non-operational when the traffic signal is in flash mode.
4. Interchangeable with a non-accessible type pedestrian pushbutton with no modifications to the Controller Assembly (CA) or Controller Unit.
5. Audible transducer integral with the APS&D housing, adjacent to the pushbutton.

B. Electrical:

1. Metallic components either grounded or insulated to preclude an electrical hazard to pedestrians under all weather conditions.
2. All features powered by the 110VAC Walk signal and the 110VAC Don't Walk signal so that additional conductors from the CA are not needed.

C Audible Pushbutton Locator

1. Frequency: repeating tone at one (1) cycle per second
2. Tone duration: ≤ 0.15 seconds
3. Volume:
 - a. Minimum setting of zero
 - b. Manually adjustable initial setting
 - c. Automatically adjusted after initial setting. Volume increased in response to a temporary increase in ambient noise and subsequently decreased with a decrease in ambient noise.
 - d. Maximum volume: 100 dBA which is the approximate sound pressure of a gasoline powered lawn mower nearby.
 - e. Automatic volume adjustment independent of other APS&Ds at the intersection.
 - f. May be disabled without affecting operation of audible pedestrian signal.
4. Silent only during walk interval. Active all other times.

D. Vibratory Tactile Arrow Pushbutton

1. Pushbutton contained in a circular assembly which fits inside the housing and is attached to the housing with 4 screws.
2. ADA compliant: Size: ≥ 2.0 " (50) diameter, Actuation force: ≤ 5 ft-lb (22.2 N)
3. Shape: Circular, raised slightly above housing so that it may be actuated with the back of a hand
4. Tamper-proof, vandal-proof, weatherproof, freeze-proof, impact-resistant design and construction.
5. Actuation method: Piezo technology. Mechanical not allowed.
6. Operation: Vibrates only when walk signal is displayed. Inactive all other times
7. Tactile Arrow:
 - a. Attached to surface of the button assembly by a tamperproof method that allows direction of arrow to be field adjusted left or right to be parallel to the corresponding crosswalk.
 - b. Raised slightly above surface of pushbutton, minimum 0.125" (0.3).
 - c. Size: Length ≥ 1.5 " (38), Height ≥ 1.0 " (25)
 - d. Color: Sharp contrast to background color of pushbutton and housing

E. Audible Walk Interval

1. Operation independent of other APS&Ds at intersection.
2. Active only during the walk interval (when the walk signal is displayed).
3. Volume:

- a. Minimum setting of zero
- b. Manually adjustable initial setting
- c. Automatically adjusted after initial setting. Volume increased in response to a temporary increase in ambient noise and subsequently decreased with a decrease in ambient noise.
- d. Automatic volume adjustment independent of other APS&Ds at the intersection.
- e. Maximum volume: 100 dBA which is the approximate sound pressure of a gasoline powered lawn mower nearby.
- 4. Duration:
 - a. Default method: Automatically set by the duration of the visual walk signal display.
 - b. When selected: Manually set when rest-in-walk is used for a concurrent pedestrian movement.
- 5. Audible sounds that mimic any bird call are not allowed.

F. Type A, Percussive Tone:

- 1. Repeating tone at eight (8) to ten (10) ticks per second.
- 2. Tone frequency: Multiple frequencies with a dominant component at 880 Hz which creates a "tick - tick - tick..." sound.

G. Pushbutton Housing/Sign Frame/Sign

- 1. One piece die cast aluminum meeting requirements of ASTM B85.
- 2. Sign frame designed to accept 9" x 12" (230 x 300) four-hole advisory sign.
- 3. Flat back to facilitate surface mount.
- 4. Available brackets to either pedestal top-mount or pole side-mount on pole diameter range of 3½" (89) to 15" (380).
- 5. Available brackets to allow mounting two (2) APS&Ds to the same 3½" (89) pole, facing ≥ 60 degrees apart, at the same height.
- 6. Wire entrance through the rear.
- 7. Stainless steel mounting hardware.
- 8. Color: Dark Green, Federal No 14056, Federal standard No. 595
 - a. Finish: Housing/Frame and all mounting brackets either:
 - 1. Painted with 3 coats of infrared oven-baked paint before assembly.
 - 2. Primer: Baked iron oxide which meets or exceeds FS TT-P-636.
 - 3. Second coat: Exterior-baking enamel, light gray, which meets or exceeds FS TT-E-527.
 - 4. Third coat: Exterior-baking enamel, which meets or exceeds FS TT-E-489.
 - 5. Electrostatic powder coated after chemically cleaned.
- 9. Sign: CT DOT Sign No. 31-0845

473.2.4 Non-Intrusive Detection System: Each intersection shall be equipped with a "non-intrusive" detection system installed in accordance with the manufacturer's installation instructions and requirements of these specifications. "Non-intrusive" is defined as having no devices embedded in the roadway surface or subsurface. These include video, radar, and thermal imaging detection systems.

- A. As a minimum, a single detector shall be capable of capturing vehicles and bicycles in each lane up to four vehicle lanes and one bicycle lane per approach at the stop bar.
- B. Provide vehicular detection zone(s) to extend a minimum of 60 feet from the stop bar.
- C. An optional feature would be to distinguish bicycles from vehicles at the stop bar.
- D. When specified, provide advance vehicular detection at a maximum distance of 400 feet from the stop bar.
- E. The detection system shall be capable of emulating the current third car detection system used by Phoenix in signalized left turn lanes. This requires independent multiple detection zones within a single lane.

- F. If detection processor cards are used, no more than four (4) detection processor cards shall be required for a standard 4-legged intersection.
- G. No more than 4 detector slots shall be used for a standard 4-legged intersection.
- H. Detection cards where used shall be compatible with NEMA TS/2 Cabinets, Econolite ASC/2, ASC/3, Cobalt Classic, and ATC controllers.
- I. The manufacturer shall have the capability of providing a conversion kit for use in a TS/1 cabinet.
- J. Detection equipment and power supplies shall be rated to operate properly at minimum between -34°C and +74°C, (-30°F and +165°F). Power requirements shall be compatible within a TS/1 and TS/2 cabinet.
- K. Camera detection systems shall have the ability to transmit MPEG4, MJPEG or H.264 video compression over TCP/IP network. The TMC client software shall have the ability to configure detection zones within the selected camera view and have the ability to upload /download the current configuration to the camera detector processor.
- L. Camera detection shall have the ability to detect and ignore vehicle shadows traversing the detection zones.
- M. Image detection systems shall have the ability to stream images from all cameras at the intersection simultaneously without adverse effects to the detection or the image stream.

Network Communication Requirements

- N. The detection equipment shall be compatible with standard TCP/IP Ethernet communication protocols and have the ability to be configured remotely from the Traffic Management Center (TMC). It shall be compatible with Tropos Communications routers and be able to transmit data through a Tropos Mesh network, fiber communications network and P2P wireless radios.
- O. The detection processor(s) shall have an Ethernet RJ45 interface and have the ability to be configured locally and remotely via web interface or client software. Client software shall be compatible with Win7 to the current Windows operating systems and Firefox, Internet Explorer and Chrome latest version browsers.
- P. The detection processor shall be capable of remote access for all of the detectors attached to that processor at the same time.
- Q. Detection systems shall have the ability to transmit broadband communication over TCP/IP network.
- R. The TMC client software shall have the ability to configure detection zones within the selected detector view and have the ability to upload /download the current configuration to the detector processor.
- S. The manufacturer shall have the capability to remotely record detection operation (images and detection zones) through the RJ45 connection.
- T. The manufacturer shall have the capability to save configurations by time- of-day.
- U. Client software and detection firmware updates shall be provided and have the ability to be upgraded by the City of Phoenix signal technician staff at no cost to the City.
- V. Non-intrusive Detection equipment shall be an Aldis GridSmart System, Econolite Camera Detection System, Flir Thermal Imaging Camera System, ITS +++ Camera Detection System, Wavetronix, meeting the above requirements; or approved equal.

473.3 CONSTRUCTION REQUIREMENTS:

473.3.2 Pedestrian Push Button (Bullnose): Drill appropriate size hole for wire entrance and tap screws as provided by manufacturer's installation instructions at the appropriate height. Mount push buttons to the pole using the hardware as specified by the manufacturer.

Pedestrian push buttons will be wired from the terminal block in the push button to the point of connection in the hand hole at the base of the traffic signal pole plus an additional 16 inches

beyond the hand hole with continuous lengths of single conductor wire of the appropriate color. Pedestrian push button wires will not be taped together except at the hand hole in the pole base as shown on the Plans and through drilled pole wire entrance as described herein.

473.3.3 APS Push Button: Drill appropriate size hole for wire entrance and tap screws as provided by manufacturer's installation instructions at the appropriate height. Mount APS push buttons to the pole using the hardware as specified by the manufacturer. Install APS controller unit in the appropriate pedestrian signal head.

APS Pedestrian push buttons will be wired from the terminal block in the push button to the point of connection in the hand hole at the base of the traffic signal pole plus an additional 16 inches beyond the hand hole with continuous lengths of single conductor wire of the appropriate color. Pedestrian push button wires will not be taped together except at the hand hole in the pole base as shown on the Plans and through drilled pole wire entrance as described herein. APS push buttons have a four conductor cable that is to be installed in the pole to connect with the APS Controller Unit. If the cable provided is of insufficient length, splice a four conductor cable with the same color conductors as recommended by the manufacturer to complete the circuit.

473.3.4 Non-Intrusive Detection System: Mount the detector to the pole or mast arm using the hardware and installation instructions as specified by the manufacturer. Provide and run the manufacturer's specified wire from the non-intrusive detector from the mount through the mast arm or pole at the point of attachment down the pole, through the conduit and junction boxes to the signal control cabinet. Install the Non-Intrusive detection processor in the signal control cabinet, connect lead-ins from detector. A Traffic Signal Inspector must be present when working on or in traffic signal equipment including poles, mast arms, cabinets, conduits, and junction boxes. Work within the cabinet will require coordination with the Traffic Signal Shop and at least a 48 hour notice to have a technician open the cabinet and be present while the cabinet is open. Call can be made to City of Phoenix Traffic Signal Supervisor (602) 262-6733 to make arrangements for both the inspector and technician.

The traffic signal technician will install the processor within the cabinet. The contractor shall make the termination of the field wires to the detection processor. The traffic signal technician will make any additional connections needed in the cabinet between the detection processor and any existing equipment within the cabinet required by the manufacturer.

473.4 MEASUREMENT:

Pedestrian Push Buttons and APS Push Buttons will be measured as a unit for each type of push button furnished and installed. Non-Intrusive Detection Systems will be measured by intersection (by number of legs instrumented) as a unit furnished and installed.

473.5 PAYMENT:

The accepted quantities of Push Buttons by type measured as provided above, will be paid for at the contract unit price. Payment for Push Buttons by type shall be full compensation for the work, including drilling pole, mounting hardware, wiring within the pole, and any incidentals for complete installations of detectors COMPLETE IN PLACE.

The accepted quantities of Non-Intrusive Detection Systems measured as provided above, will be paid for at the contract unit price. Payment for Non-Intrusive Detection Systems shall be full compensation for the work, providing detectors and detection processors including mounting the detectors, mounting hardware, drilling pole or mast-arm, wiring within the pole, wiring between the pole and signal control cabinet, connectors between the detection processor and existing equipment in the cabinet, and any incidentals for complete installations of detectors COMPLETE IN PLACE.

30. Add the following new **SECTION 474 TRAFFIC SIGNAL POLES AND ACCESSORIES** as follows:

474.1 DESCRIPTION:

The work under this section shall consist of furnishing traffic signal poles, mast arms, extensions, risers, luminaire mast arms and dampers when required in accordance with the Equipment Sheet of the Approved Traffic Signal Plans, the COP Traffic Signal Standard Details, and ADOT Standards. The City of Phoenix crews will perform the installation of Contractor Furnished materials.

474.2 GENERAL STANDARDS:

Types of poles to be furnished are as follows:

- | | | | |
|--------------|---------------|-----------------|-------------------|
| 1. Type 'A' | 7. Type 'LM' | 12. Type 'P45' | 16. ADOT Type 'J' |
| 2. Type 'AP' | 8. Type 'LP' | 13. Type 'DP45' | 17. ADOT Type 'K' |
| 3. Type 'PB' | 9. Type 'SM' | 14. Type 'P70' | 18. ADOT Type 'R' |
| 4. Type 'BP' | 10. Type 'SR' | 15. Type 'DP70' | 19. ADOT Type 'Q' |
| 5. Type 'G' | 11. Type 'SQ' | | 20. ADOT Type 'V' |
| 6. Type 'GP' | | | 21. ADOT Type 'W' |

474.2.1 Certificates of Analysis:

The Certificates of Analysis including description of material supplied, quantity represented by the certificate, means of material identification (such as label, lot or marking), statement the material complies in all respects with the requirements of the cited specification, name, title and signature of person having authority to bind the manufacturer or supplier of the material, and results of tests required by the specification shall be submitted for all structural steel and high-strength bolts.

474.2.2 Structural Shapes, Plates, and Bars: Exposed surfaces of shafts, mast arms and risers shall be finished smooth and all exposed edges shall be neatly rounded to a 1/8" radius.

474.2.3 Weld Inspection: All welds shall be inspected per requirements shown in COP Traffic Signal Standard Details, and ADOT Standards.

474.3 MATERIALS:

474.3.1 Pole Shafts: Pole shafts shall be fabricated according to the requirements shown on the COP Traffic Signal Standard Details for Types 1 through 15 and ADOT Standards for Type 16 through 21. Types 7 through 15 shall include either a blank top plate, 1' riser, 5' riser, 10' riser or a 20' riser as shown on the plans. The blank top plate or riser will be paid for separately. Hand holes in the base of the poles shall conform to the details shown on the COP Traffic Signal Standard Details. All welds shall be continuous and any exposed welds, except fillet welds, shall be ground flush with the base metal.

474.3.2 Mast Arms: Mast arms shall be fabricated according to the requirements shown on the COP Traffic Signal Standard Details for Types 9 through 15 and on ADOT Standards for Type 16 and 21.

474.3.3 Mast Arm Extensions: Mast arm extensions shall be fabricated according to the requirements shown on the COP Traffic Signal Standard Details for Types 9 through 15. Mast arm extension configurations shall utilize the longest primary mast possible, to achieve mast arm lengths specified on the approved traffic signal plans.

474.3.4 Damper: The mast arms for pole Types 12 through 15 may require a damper as shown on the approved traffic signal plans. The damper shall be fabricated in accordance to the requirements shown on the COP Traffic Signal Standard Details. If dampers are required by the manufacturer for pole Types 16 through 21, they shall be fabricated in accordance to the manufacturer's

requirements.

474.3.5 Risers: The risers or blank top plates for pole shafts Types 7 through 15 shall be fabricated according to the requirements shown on the COP Traffic Signal Standard Details. In lieu of a riser on a pole shaft, a blank plate.

The risers can accommodate single and dual luminaire mast arms, LED illuminated street name signs, wireless mesh radios or CCTV. Pole shaft Types 7, 9, 10 & 11 are restricted to 1' and 5' risers with a single luminaire mast arm shoe. Pole shafts Type 8 and 12 through 15 can accommodate all risers.

474.3.6 Luminaire Mast Arms: The mast arms for the luminaires and associated mounting hardware shall be fabricated as per COP Traffic Signal Standard Details for Types 7 through 15. For ADOT Type 16 through 21, the mast arms for the luminaires and the associated mounting hardware shall be fabricated as per ADOT Standards.

474.3.7 Finish: Pole shafts, mast arms, extensions, and luminaire mast arms shall be finished with a 2.5 mil powder coat (color will be confirmed by the Traffic Signal Shop). The visual appearance of the finish shall be uniform. Discoloration of the finish such as dark areas, dark streaks, dark rings, or transportation handling marks, which are considered excessive by the Traffic Signal Engineer or designee, shall not be allowed. Pole shafts, mast arms, and luminaire mast arms that have a finish unacceptable to the Traffic Signal Engineer or designee shall either be repaired or replaced to the satisfaction of the Traffic Signal Engineer or designee at no additional cost to the Department.

474.3.8 Labeling: All equipment and products shall be permanently labeled with the manufacturers name, month of manufacture date, and equipment type.

474.3.9 Grout: Standard grout material will be 3:1 sand /cement mix. Standard grout shall be used for all installations where the bottom of the pole's baseplate is less than 3.5 inches above finished surface. Where the finished surface is angular to the baseplate, standard grout can be used if the longest gap is less than 4 inches.

If the measured gap exceeds requirements for standard grout, the applied grout shall be non-shrink, cementitious grout. Non-shrink grout materials shall be furnished premixed in a dry state including hydraulic cement, fine aggregate, and other ingredients as required for grout performance. Only the addition of mix water shall be required at the site of the work. The minimum compressive strength at seven days shall be 2,500 pounds per square inch and the minimum compressive strength at 28 days shall be 5,000 pounds per square inch. Grout material will be 12:1 sand /cement mix.

474.4 CONSTRUCTION REQUIREMENTS:

474.4.1 Drawings: The Contractor shall submit copies of the detailed shop drawings to the Traffic Signal Engineer or designee for approval. Shop drawings shall be submitted sufficiently in advance of the start of the work to allow time for review by the Traffic Signal Engineer or designee and corrections by the Contractor, if any, without delaying the work. Shop drawings shall give full, detailed dimensions and sizes of component parts of the structure and details of all miscellaneous parts, such as pins, nuts, bolts, and drains. Unless otherwise specified in the contract documents, shop drawings shall identify all materials that shall be used to produce each piece.

474.4.2 Contractor Furnished Materials: Traffic signal material and equipment to be furnished by the Contractor for installation by the City of Phoenix crews will be delivered to the following location:

City of Phoenix Traffic Signal Shop
2141 E. Jefferson St.
Phoenix, Arizona 85034

The Contractor shall contact the City of Phoenix Traffic Signal Supervisor (602) 319-5162 14 days prior to desired delivery date to confirm the item list, space availability, date and time. The item list to be provided by the contractor will show a detailed breakdown of all the poles, mast arms, extensions, risers, and dampers by size and type, including any associated hardware and materials needed for installation. Warehouse hours for pick-up and delivery are 8:00 am – 2:00 pm Monday through Friday. Based on space available for delivery, the contractor may need to make provisions for storing materials until space becomes available at the Traffic Signal shop or coordinate delivery of materials at the project site on the date of installation at no additional cost to the City.

The cost of handling and delivering all material and equipment is included in the contract price of the associated pay item. The Contractor using the Contractor's equipment shall load and unload the materials (poles, mast arms, etc.) onto the designated locations. COP personnel shall not load or unload the materials. The Contractor shall be responsible for any damage that occurs during the loading and unloading process.

The Contractor will be held responsible for all material and equipment delivery until acceptance by the Traffic Signal Shop. Any materials that have any damage will not be accepted. The Traffic Signal Supervisor or designee will issue a receipt for the materials received. The receipt will be placed in the project file and a copy given to the Contractor.

474.5 MEASUREMENT:

Poles, mast arms, extensions, risers, dampers, and luminaire mast arms for traffic signals will be measured as individual units for each pole shaft, mast arm by length, extensions by length, risers by height, damper by each and each luminaire mast arm by type.

474.6 PAYMENT:

The accepted quantities of pole shafts by type will be paid for at the contract unit price each. Payment shall be full compensation for the work, FURNISHING AND DELIVERING including grout, nuts, washers, and any other incidentals for installing the pole shaft.

The accepted quantities of mast arms by length will be paid for at the contract unit price each. Payment shall be full compensation for the work, FURNISHING AND DELIVERING including nuts, bolts, washers and any other incidentals for attaching the primary mast arm to the pole shaft.

The accepted quantities of mast arm extensions by length will be paid for at the contract unit price each. Payment shall be full compensation for the work, FURNISHING AND DELIVERING including attachment hardware and any other incidentals for attaching the extension to the primary mast arm.

The accepted quantities of risers by height or blank top plate will be paid for at the contract unit price each. Payment shall be full compensation for the work, FURNISHING AND DELIVERING including nuts, bolts, washers and any other incidentals for attaching the riser or blank top plate to the top of the pole shaft.

The accepted quantities of luminaire mast arms by type will be paid for at the contract unit price each. Payment shall be full compensation for the work, FURNISHING AND DELIVERING including nuts, bolts, washers and any other incidentals for attaching the luminaire mast arm to the pole shaft or riser.

31. Add the following new **SECTION 479 REMOVAL AND SALVAGE OF EXISTING TRAFFIC RELATED FACILITIES** as follows:

479.1 DESCRIPTION:

It is the purpose of this section to provide information necessary for completion of the removal and

disposal of traffic signal equipment and materials as shown on the Approved Traffic Signal Plan to be removed.

479.2 CONSTRUCTION REQUIREMENTS:

479.2.1 General: All removals shall be done in accordance with Section 350, as shown on the Approved Traffic Signal Plan, and as detailed below. Any item noted on the Approved Traffic Signal Plan or these Specifications to be salvaged shall be delivered to the COP Traffic Signal Shop or as directed by the Engineer or designee. Delivery to the Traffic Signal warehouse shall include unloading the salvaged materials at a designated warehouse location by the Contractor using the Contractor's own equipment. Two working days (forty-eight hours minimum) in advance of the intended date of delivery, the Contractor shall coordinate the proposed date, time, and items to be delivered with the COP Traffic Signal Supervisor 602-319-5162 Warehouse hours for receiving deliveries are 8:00 am – 2:00 pm Monday through Friday. The address for the City warehouse is:

City of Phoenix Traffic Signal Shop
2141 E. Jefferson St.
Phoenix, Arizona 85034

Remove, deliver and unload in good condition any existing equipment identified by the COP as salvageable by to the location designated by the COP. Dispose of all signal hardware identified by the COP as non-salvageable or scrap material. Non-salvageable material becomes the property of the contractor. Cost of providing for its proper storage and ultimate disposal to meet Federal or State requirements is incidental to the payment for the removal of the item.

Deliveries of salvaged or obsolete traffic signal equipment to the location designated by the COP will be done in accordance with a schedule submitted to and approved by the COP no less than 24 hours in advance of the action.

Material will be inventoried upon delivery and identified with the intersection from which the material was removed.

479.2.2 Signal Poles: For signal poles, remove, transport and unload mast arm poles, mast arms, poles and posts identified as salvageable by the COP as described in these Specifications. Disassemble mast arm poles and mast arms before transporting. Leave hand hole covers in place. Remove all signal mounting hardware from poles and mast arms before transporting. Attaching hardware and anchor bolt nuts and washers may be bulk packed for delivery.

479.2.3 Controller Cabinet and Power Pedestal: For controller cabinets including internal electronics and power pedestals identified as salvageable by the COP the field wiring will be disconnected, and all loose electronics in the control cabinet will be removed. Both the controller cabinet and power pedestal may be ground mounted or pole mounted. The controller cabinet, loose electronic devices, and power pedestals will be transported and unloaded as described in these Specifications.

479.2.4 Foundations: Foundations within the ultimate curb and gutter of the roadway shall be part of roadway plans and removed in accordance with Section 350. The Approved Traffic Signal Plans will identify foundations to be removed in accordance with this section. Existing Type "A" poles, pedestrian push-button poles, power pedestals, and controller cabinets will be removed in their entirety as well as any other foundations less than 42 inches in depth. Deeper foundations such as those for mast arm poles must be removed to a minimum of 10 inches below the finished grade of the sidewalks or landscaping. Voids created by the removal of the foundations will be backfilled with natural material compacted to match the density of the surrounding material.

479.2.5 Incidental Traffic Items: This item provides for the removal of all incidental traffic items some of which will be salvageable such as signal heads, pedestrian heads, luminaires, pedestrian

push buttons and non-salvageable such as junctions boxes, conduit, wiring, loops, and loop lead-ins. Prior to removal of any items, the contractor shall meet with COP Traffic Signal Engineer or designee to identify specific salvageable materials which will be transported to the location noted above. Items identified as non-salvageable, shall become the property of the contractor and disposed of in accordance with applicable State or Federal regulations.

Junction boxes rendered obsolete by the signal construction will be removed and disposed of by the contractor. Conduit runs shallower than 24 inches will be removed. Existing conduit runs with 24 inches or more of cover (when compared to the finished grade) may be abandoned in place. The Contractor will remove all wire and cable from conduits to be abandoned in place. The Contractor will dispose of all conduit, wire, and cable removed. For loops and loop lead-ins in saw cut they are to be abandoned in place. Conduit for twisted pair loop lead-in must be cleared of wire, and may be abandoned in place or removed, at the Contractor's choice. If removed, any damage to existing pavement to remain is to be repaired at the Contractor's expense.

479.3 MEASUREMENT:

Removal of identified existing facilities specified in 474.2.2 (Signal Poles) and 474.2.3 (Cabinets and Power Pedestals) will be measured on an "each" basis by type of facility removed.

The method of measurement for 479.3.4 (Foundations) shall be by each unit removed.

The method of measurement for removal of traffic items specified in 479.2.5 shall be by lump sum for Incidental Traffic Items Removal on the project for all intersections shown on the plans.

479.4 PAYMENT:

Removal of existing facilities by type, measured as provided above, will be paid for at the contract price. Said price shall be full compensation for the removal, transportation, and delivery of salvaged items or the removal and the disposal of removed items not scheduled to be salvaged as specified and shown on the project plans.

32. 505 CONCRETE STRUCTURES, Add the following to Section 505 CONCRETE STRUCTURES:

CONSTRUCTION REQUIREMENTS:

Headwall

Materials to be used for construction of headwalls, shall be as specified below.

Reinforcing steel shall be in accordance with Section 727 of the MAG Uniform Standard Specifications and shall be minimum grade 40 with $F_x=20,000$ psi for bar size #6 or smaller, and grade 60 with $F_x=24,000$ psi for bar size #7 or larger.

Portland Cement concrete shall be Class "A", $f'_c=3,000$ psi conforming to Section 725 of the MAG and COP Supplement to MAG Uniform Standard Specifications.

MEASUREMENT AND PAYMENT:

The headwall shall be paid for at the unit price bid under the item Headwall for 12" Pipe and Headwall for 18" Pipe, MAG Standard Detail 501-1, 501-2, and 501-3 and shall be compensation in full for constructing the headwall structure as shown on the plans and as specified including concrete, reinforcing steel, embed plates, forming, finishing, curing, structural excavation, backfilling compacting, and any other work or materials necessary to provide a complete installation.

Catch Basin will be paid for at the contract unit price for each type of catch basin, as represented by the respective bid item, regardless of the dimensional or other differences occurring within a particular type. The unit price to be paid under these items will be compensation in full for furnishing and placing the catch basin structure as shown on the plans and as specified, including, when applicable, all removal and replacement of existing curb, gutter and sidewalk, concrete, reinforcing steel, forming, vibrating, finishing, curing, access opening frame and cover, embedded angles, grating, anchor bolts, structural excavation, backfill, compaction, pavement replacement and any necessary modifications of catch basin structure during construction.

Scuppers and Spillways shall be paid for at the unit price bid under the item Concrete Scupper and Concrete Spillway, MAG Standard Detail 206 and 206-1 and shall be compensation in full for constructing the scupper and spillway structure as shown on the plans and as specified including concrete, reinforcing steel, embedded plates, forming, finishing, curing, excavation, backfilling compacting, and any other work or materials necessary to provide a complete installation.

End Section shall be paid for at the unit price bid under the item Concrete End Section, MAG Standard Detail 545 and shall be compensation in full for constructing the end section structure as shown on the plans and as specified including concrete, reinforcing steel, embedded plates, forming, finishing, curing, excavation, backfilling compacting, and any other work or materials necessary to provide a complete installation.

Channel Lining shall be paid for at the unit price bid under the item Concrete Channel Lining, per plans and shall be compensation in full for constructing the channel lining structure as shown on the plans and as specified including concrete, reinforcing steel, embedded plates, forming, finishing, curing, excavation, backfilling compacting, and any other work or materials necessary to provide a complete installation.

33. **601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION,** Add the following to **Subsection 601.2.6 Grading and Stockpiling** after the first paragraph:

During excavation, material suitable for backfilling shall be piled in an orderly manner, a sufficient distance back from the edges of trenches, to avoid overloading and to prevent slides or cave-ins. Material unsuitable for backfilling, or excess material, shall be hauled from the job site and disposed of by the Contractor.

34. **601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION,** Add the following to **Subsection 601.2.7 Shoring and Sheeting:**

The Contractor shall do such trench bracing, sheathing or shoring necessary to perform and protect the excavation as required for safety and conformance to governing laws. The bracing, sheathing or shoring shall not be removed in one operation, but shall be done in successive stages as determined by the Engineer to prevent overloading of the pipe during backfilling operations. The cost of the bracing, sheathing or shoring and the removal of same shall be included in the unit price for the pipe.

35. **601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION,** Add the following to **Subsection 601.2.8 Open Trench:**

Except where otherwise noted in the special provisions, or approved in writing by the Engineer, the maximum length of open trench, where the construction is in any stage of completion (excavation, pipe laying or backfilling), shall not exceed 1,320 feet in the aggregate at any one location.

Any excavated area shall be considered open trench until all ABC for pavement replacement has been placed and compacted. With the approval of the Engineer, pipe laying may be carried on at more than one separate location, the restrictions on open trench applying to each location. Trenches across streets shall be completely backfilled as soon as possible after pipe laying.

Substantial steel plates with adequate trench bracing shall be used to bridge across trenches at street crossings where trench backfill and temporary patches have not been completed during regular work hours. Safe and convenient passage for pedestrians shall be provided. The Engineer may designate a passage to be provided at any point he deems necessary.

36. **601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION,** Add the following new **Subsection 601.2.9 Pavement and Concrete Cutting and Removal:**

601.2.9 Pavement and Concrete Cutting and Removal: Where trenches lie within the Portland cement concrete section of streets, alleys, driveways or sidewalks, etc., such concrete shall be sawcut to neat, vertical, true lines in such a manner that the adjoining surface will not be damaged. The minimum depth of cut shall be 1 ½ inches or ¼ of the thickness, whichever is greater.

Asphalt pavement shall be clean-cut with approved equipment and by approved methods in accordance with the requirements of Section 336.

No ripping or rooting will be permitted outside limits of cuts. Surfacing materials removed shall be hauled from the job site immediately and will not be permitted in the backfill.

37. **601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION,** Add the following to **Subsection 601.3.4 Backfill:**

BACKFILL TYPE REQUIREMENTS FOR PIPE TRENCHES

Type "B" backfill, as shown on City of Phoenix Detail P1200, shall be used for all mainline pipe installations across major, collector, or other signalized intersections. At a minimum, the extent of the Type "B" backfill shall be from curb-return-to-curb-return through the intersection, unless noted otherwise on the plans or in the special provisions. Type "B" backfill shall also be used for all lateral pipe connections in ALL streets. Type "A-Modified" backfill (suitable native material as specified in City of Phoenix Supplement to MAG Specification Section 601.3.2, except that no piece larger than 3 inches will be allowed), as shown on City of Phoenix Detail P1200, may be used at all other locations, from the top of bedding to the specified pavement subgrade level, unless noted otherwise on the plans or in the special provisions. There is no separate measurement or payment for pipe backfill. The cost is considered included in the bid price for furnishing and installing the pipe.

The pavement replacement section shall be as specified on the plans or in the special provisions and shall be paid for by the square yard or by the ton, whichever is indicated in the special provisions and on the bid proposal.

38. **601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION,** Add the following new **Subsection 601.4.5 Cutting Newly Placed Pavement for Pipe Installation:**

601.4.5 Cutting Newly Placed Pavement for Pipe Installation: In the event temporary or base course pavement must be cut in order to install pipe, the cost of saw cutting, removing and replacing the asphalt shall be considered incidental to the cost of the pipe.

39. **601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION,** Add the following new **Subsection 601.6 PROTECTION OF EXISTING UTILITIES:**

601.6.1 Utilities: Unless otherwise shown on the plans or stated in the specifications, all utilities, underground or overhead, shall be maintained in continuous service throughout the entire contract period. The Contractor shall be responsible and liable for any damages to or interruption of service caused by the construction.

If the Contractor desires to simplify his operation by temporarily or permanently relocating or shutting down any utility or appurtenance, he shall make the necessary arrangements and

agreements with the owner and shall be completely responsible for all costs concerned with the relocation or shutdown and reconstruction. All property shall be reconstructed in its original or new location as soon as possible and to a condition at least as good as its previous condition. This cycle of relocation or shutdown and reconstruction shall be subject to inspection and approval by both the Engineer and the owner of the utility.

The Contractor shall be entirely responsible for safeguarding and maintaining all conflicting utilities that are shown on the plans (Sections 107 and 105 apply). This includes overhead wires and cables and their supporting poles whether they are inside or outside of the open trench. If, in the course of work, a conflicting utility line that was not shown on the plans is discovered, the Contracting Agency will either negotiate with the owner for relocation, relocate the utility, change the alignment and grade of the trench or as a last resort, declare the conflict as "extra work" to be accomplished by the Contractor in accordance with Section 104.

601.6.2 Irrigation Ditches, Pipes and Structures: The Contractor shall contact the owners of all irrigation facilities, and make arrangements for necessary construction clearances and/or dry-up periods.

All irrigation ditches, dikes, headgates, pipe, valves, checks, etc., damaged or removed by the Contractor, shall be restored to their original condition or better, by the Contractor at no additional cost to the Contracting Agency.

601.6.3 Building, Foundations and Structures: Where trenches are located adjacent to building, foundations and structures, the Contractor shall take all necessary precaution against damage to them. The Contractor shall be liable for any damage caused by the construction.

Except where authorized in the special provisions or in writing by the Engineer, water settling of backfill material in trenches adjacent to structures will not be permitted.

There will be no separate measurement or payment for this work. The Contractor will include all associated costs in the unit bid price for the pipe installation.

601.6.4 Permanent Pipe Support Options and Encasements: Where 18-inch or larger mainline pipes (or other pipes as directed by the Engineer) cross under existing sanitary sewerlines (vitrified clay pipe 12-inches or smaller), the Contractor shall permanently support the sanitary sewerline per MAG Detail 403-1, 403-2 or 403-3. If the ductile iron pipe replacement option is used (403-3), and the required crossing length is more than one joint of pipe, concrete pipe supports as detailed in MAG Details 403-1 or 403-2 shall be used in addition to the ductile iron pipe. For a single joint of standard 20-foot-long ductile iron pipe replacement, the maximum trench width allowed at the point of the sewer line crossing shall be 9-feet, unless otherwise directed by the Engineer. Mechanical or restrained joints shall be required on all multiple-joint ductile iron pipe crossings.

Where waterlines, reclaimed waterlines or sanitary sewer lines (new or existing) cross over or under each other, pipeline encasements shall be provided as necessary in accordance with MAG Detail 404.

When the ductile iron pipe replacement option is used for the sewer lines, the new pipe shall be properly blocked at each end with one or more bricks resting on undisturbed or 95% compacted soil haunches outside the trench walls to prevent differential settlement.

The interior of all ductile iron pipe used for sewer lines shall be coated per the specification, "LINING FOR DUCTILE IRON PIPE USED FOR SEWER LINES" in these Special Provisions.

Upon completion of a sanitary sewer line support or encasement, including backfilling and compacting, but prior to permanent pavement replacement, the Contractor shall request, through the Engineer, a televising of the line by the City Water Services Department to ensure proper line

and grade of the sanitary sewer pipe. If the pipe is out of alignment, it shall be the Contractor's responsibility to remedy the situation at no cost to the City.

If the sanitary sewer line is less than 8-inches in diameter, the Contractor shall provide the necessary equipment and televise the line to determine proper pipe alignment. The Engineer shall be present during the televising, and a video tape of the televising shall be made for the City Water Services Department for confirmation that the pipe is properly aligned. The cost of televising the line and preparing the video tape shall be included in the bid price paid for the pipe support or encasement.

Permanent pipe supports shall be paid for at the unit price bid for each unit installed regardless of type. Encasements shall be paid for at the unit price bid per linear foot installed regardless of type. The unit price bid for either item of work shall be compensation in full for providing complete and satisfactory permanent pipe supports or encasements, including ductile iron pipe and fittings, concrete, reinforcing steel, forming, vibrating, any required earthwork, televising and videotaping, and any other incidental items necessary.

601.6.5 Electronic, Telephonic, Telegraphic, Electrical, Oil and Gas Lines: During trenching operations, underground facilities such as electronic, telephonic, telegraphic, electrical, oil and gas lines shall be supported and protected by the Contractor. Support for plastic pipes shall be continuous along the bottom of the pipe. Support for metal pipe and electrical conduit may be continuous or nylon webbing may be used for suspension at no greater than ten-foot intervals.

The Contractor shall avoid damaging any pipes, conduits or duct bank facilities during excavation, foundation and bedding placement, and trench backfilling and compaction.

601.6.6 Measurement and Payment:

There will be no measurement or payment for this work. The Contractor will include all associated costs in the unit bid price for the pipe installation.

40. **601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION**, Add the following new **Subsection 601.7 CONTRACTOR CERTIFICATION OF INSTALLATION PROCEDURES:**

601.7 CONTRACTOR CERTIFICATION OF INSTALLATION PROCEDURES

When requested in the Special Provisions or by the Engineer prior to installation, the Contractor shall furnish to the Contracting Agency an affidavit (certification) from the pipe manufacturer (or his designee) stating that the Contractor is familiar with the manufacturer's suggested installation methods and procedures and the installation complies with those procedures and is consistent with MAG requirements.

Also, when required in the Special Provisions or requested by the Engineer, the pipe manufacturer or his designee will review the Contractor's methods and procedures for pipe installation in the field. The Contractor will make any adjustments in the installation as recommended by the manufacturer or his representative. If necessary, the Contractor may be required to reinstall or provide corrections to pipe installed prior to the field review at no cost to the Agency. Once the manufacturer or his representative has reviewed the Contractor's installation methods and the Contractor has adjusted his installation methods as recommended by the same, the manufacturer or his representative shall furnish to the Contracting Agency an affidavit (certification) that the Contractor's installation methods and procedures, at the time of the review, complied with the manufacturer's installation practices. The affidavit must provide the name of the manufacturer's representative witnessing the pipe installation.

41. **610 WATERLINE CONSTRUCTION**, Add the following to **Subsection 610.4 CONSTRUCTION METHODS:**

WATER MAIN REALIGNMENT (CONTINGENT ITEM)

In the event of unavoidable conflict between proposed construction and an existing water main, the Contractor shall vertically and/or horizontally realign the water main in accordance with COP Detail P1370 and Section 610. No concrete thrust blocks will be allowed. All pipe shall be ductile iron with restrained joints.

The water main realignment shall include, but not be limited to, excavation, backfill, compaction, pipe, fittings, offsets, couplings, sleeves, joint restraint and hardware. The realigned water main shall be visually inspected for leaks under line pressure prior to backfilling.

The Contractor shall arrange with the Engineer to have the line shut down in order to perform the work. At no cost to the Contractor, the City Water Services Department will provide necessary valve cut-ins, take the line out of service and flush the relocated line prior to placing it back in service.

Materials for water main realignment shall be ductile iron in accordance with COP Supplement to MAG Subsection 750.2 DUCTILE IRON WATER PIPE.

Measurement and Payment

Measurement will be made per each realignment constructed for the various water main sizes encountered.

Payment for realignment of water mains will be made at the unit price bid per each under proposal items "WATERLINE REALIGNMENT, 10" AND 12", CONTINGENT ITEM".

42. **610 WATER LINE CONSTRUCTION.** Add the following new **Subsections 610.9.1 Fire Hydrant Relocation; 610.9.2 New Fire Hydrant Installation; and 610.9.3 Fire Hydrant: Remove, Salvage and Deliver to City of Phoenix:**

610.9.1 Fire Hydrant Relocation:

Fire hydrant relocations shall be paid for at the unit price bid per each under the bid item, "RELOCATE FIRE HYDRANT". The unit price bid shall be full compensation for removing and reinstalling the fire hydrants at the new locations shown on the plans and in accordance with new construction standards. All pipes, valves and fittings necessary to accomplish the relocation are to be included in the unit price. Prior to removing the fire hydrant from service and prior to reactivating the fire hydrant, the Contractor shall notify the Engineer. The Contractor shall minimize the time the fire hydrant is out of service but in no event shall the out-of-service time exceed 24 hours. If in the opinion of the Engineer, the fire hydrant should be replaced, Water Distribution Division will provide a replacement fire hydrant at no cost to the Contractor. It shall be the Contractor's responsibility to pick up the replacement hydrant and to either return the old hydrants to the Water Distribution Division Yard, or dispose of them, whichever is directed by the Engineer. In order to obtain new fire hydrant replacements, the Contractor must first obtain a written order (Field Directive) from the Engineer. Then, at no additional cost to the City, the Contractor shall pick up the specified number of units at the Water Distribution Warehouse located at 2500 S. 22nd Avenue.

610.9.2 New Fire Hydrant Installation:

New fire hydrant installations shall be paid for at the unit price bid per each under the bid item, "FIRE HYDRANT FURNISHED BY THE CITY OF PHOENIX, INSTALL". The unit price bid shall be full compensation for installing the new fire hydrants at the locations shown on the plans and in accordance with construction standards. All pipes and valves necessary to accomplish the installation shall be measured and paid for separately under their respective bid line items. All fittings necessary to accomplish the installation of the new fire hydrant shall be paid for separately under the bid item, "ALLOWANCE FOR EXCESS DUCTILE IRON FITTINGS, FURNISH AND

INSTALL". Payment for these fittings shall be made from this allowance based on approved invoiced cost of the materials only, plus bonds, insurance and taxes, and a maximum 15 percent markup for overhead and profit.

Prior to removing any existing fire hydrant from service and prior to activating the new fire hydrant, the Contractor shall notify the Engineer. Water Distribution Division will provide new fire hydrants at no cost to the Contractor. It shall be the Contractor's responsibility to pick up the new hydrants and to either return old hydrants to the Water Distribution Division Yard, or dispose of them, whichever is directed by the Engineer. In order to obtain new fire hydrant, the Contractor must first obtain a written order (Field Directive) from the Engineer. Then, at no additional cost to the City, the Contractor shall pick up the specified number of units at the Water Distribution Warehouse located at 2500 S. 22nd Avenue.

610.9.3 Fire Hydrant - Remove, Salvage and Deliver to City of Phoenix:

All existing fire hydrants to be abandoned shall be removed. The void created shall be backfilled with ABC and compacted. The surface shall be replaced to match the existing surrounding surface— asphalt, concrete, gravel, etc.

Fire hydrants served from a water main staying in service will require either a tapping sleeve and valve "cut-out" or tee "cut-out" and a new piece of pipe "cut-in" in accordance with City of Phoenix Standard Detail P1344.

Fire hydrants served from a water main not staying in service will require the fire hydrant water main lateral to be cut and plugged near the fire hydrant in accordance with City of Phoenix Standard Detail P1343.

It shall be the Contractor's responsibility to either return the old fire hydrants to Water Distribution Division Yard, or dispose of them, whichever is directed by the Engineer.

Measurement and payment for this work shall be under the bid item "FIRE HYDRANT: SALVAGE AND DELIVER TO THE CITY OF PHOENIX", and shall include, but not limited to all labor, materials and equipment necessary to remove the fire hydrant, backfill, compact and return or dispose of the fire hydrant. Pavement or concrete replacement, if any, shall be paid for under separate respective bid items. Waterline cut-outs (P1344) and cut and plugs (P1343) shall be paid under separate bid items for that work. Fire hydrant valve box and cover removal shall be paid under separate bid item for that work.

43. 702 BASE MATERIALS, Add the following to MAG Section 702 BASE MATERIALS:

All Select Material specified on the plans and Standard Details shall be Type "A" in accordance with Table 702-1.

44. 719 POLYMER MODIFIED ASPHALT CONCRETE SURFACE COOURSE, Add the following new section:

719.1 Description:

The work under this section shall consist of furnishing, proportioning and mixing all the ingredients necessary to produce a polymer modified asphalt concrete (PMAC) material.

719.2 Materials:

719.2.1 Binder: The binder used in PMAC shall meet the requirements of Table 711-2 as specified below.

The asphalt cement binder shall be terminal blended, crumb rubber and polymer-modified SHRP Graded PG 76-22 TR+ polymer in accordance with the requirements of the Asphalt Institute's Performance Graded Asphalt Binder Specification and Testing Manual, SP-1, and current MAG 711 as modified by these Special Provisions.

719.2.2 Aggregate: Coarse and fine aggregates shall conform to the applicable requirements below. Coarse mineral aggregate shall consist of crushed gravel, crushed rock, or other approved inert material with similar characteristics, or a combination thereof, conforming to the requirements of these specifications.

Coarse aggregate is material retained above the Number 8 sieve and fine aggregate is material passing the Number 8 sieve. Aggregates shall be free of deleterious materials, clay balls, and adhering films or other material that prevent thorough coating with the asphalt cement. Mineral aggregate shall conform to the following requirements when tested in accordance with the applicable test methods.

The combined gradation of the aggregate shall be dense graded and meet the following gradation:

TABLE 719-1	
MIX DESIGN COMBINED AGGREGATE REQUIREMENTS	
Sieve Size	Percent Passing
3/4"	100
1/2"	85-95
3/8"	62-85
No.8	40-50
No.40	10-20
#200	2-10

Type II Portland Cement or hydrated lime by total weight of the mineral aggregate, 1.5%

TABLE 719-2		
COARSE/FINE AGGREGATE REQUIREMENTS		
Characteristics	Test Method	Requirements
Fractured Faces, % (Plus No. 8, produced by crushing)	ARIZ-212	85, 1 fracture 80, 2 or more
Uncompacted Voids, %	AASHTO T-304, Method A	45.0
Sand Equivalent (Minus No. 4)	AASHTO T-176	65 minimum
Plasticity Index	AASHTO T-89 & T-90	Non Plastic
L.A. Abrasion, % Loss	AASHTO T-96	9 max. @ 100 Rev. 40 max. @ 500 Rev.
Combined Bulk Specific Gravity	AI MS-2	2.35-2.85
Combined Water Absorption, %	AI MS-2	0-2.5

719.2.3 Mineral Admixture: Mineral admixture used in PMAC shall be dry hydrated lime conforming to the requirements of ASTM C1097 or Portland cement conforming to ASTM C150 for Type II, or ASTM C595 for Type IP. The minimum mineral admixture content will be 1.5 percent, by weight of total aggregate. Mineral admixture shall be considered part of the total weight of aggregate and all combined specific gravity and combined water absorption calculations for aggregates and mineral admixture will be done in accordance with the latest edition of the Asphalt Institute's Manual MS-2 (AI MS-2).

719.3 Mix Design Requirement:

719.3.1 General: The mix design for PMAC shall be prepared by a laboratory that is accredited through the AASHTO Accreditation Program (AAP) in Hot Mix Asphalt Aggregates and Hot Mix Asphalt. The laboratory shall be under the direct supervision of a Civil Engineer, registered by the State of Arizona, and who is listed by ADOT as a "Qualified Asphaltic Concrete Mix Design Engineer" within ADOT's latest list of approved laboratories. The latest list of approved laboratories is available on ADOT's web page www.azdot.gov. The date of the design shall not be older than one year from the date of submittal, unless supportive documentation is provided and approved by the Engineer.

The mix design report shall include the following elements as a minimum.

- (1) The name and address of the testing organization and the person responsible for the mix design report.
- (2) The mix plant identification and/or location, as well as the supplier or producer name.
- (3) A description of all products that are incorporated in the asphalt concrete along with the sources of all products, including admixtures and asphalt binder, and their method of introduction.
- (4) The supplier and grade of asphalt binder, the source and type of mineral aggregate, and the percentage of asphalt binder and mineral admixture used.
- (5) The mix design report shall identify this as a Marshall 75-blow mix design.
- (6) The results of all testing, determinations, etc., such as: specific gravity and gradation of each component, water absorption, sand equivalent, loss on abrasion, fractured coarse aggregate particles, Tensile Strength Ratio (ASTM D4867), Marshall stability and flow, asphalt absorption, percent air voids, voids in mineral aggregate, and bulk density. Historical abrasion values may be supplied on existing sources. The submittal should include a plot of the gradation on the Federal Highway Administration's 0.45 Power Gradation Chart, plots of the compaction curves and the results of moisture sensitivity testing.
- (7) The laboratory mixing and compaction temperature ranges for the supplier and grade of asphalt binder used within the mix design, and specific gravity at 77°F.
- (8) A specific recommendation for design asphalt binder content and any limiting conditions that may be associated with the use of the design, such as minimum percentages of crushed or washed fine aggregate.
- (9) The supplier's product code, the laboratory Engineer's seal (signed and dated), and the date the design was performed.

The mix design shall be submitted to the Engineer by the Contractor for which it was developed as part of his project submittals. Once the mix design has been approved by the agency or Engineer, the Contractor and/or his supplier shall not change plants nor use additional mixing plants without prior approval of the Engineer. A new mix design shall be submitted when any changes occur in the plant operation, the producer's pit, the asphalt binder, including modifiers in the asphalt binder, or any other item that will cause an adjustment in the mix.

719.3.2 Mix Design Criteria: The mix design shall be performed by the Marshall Mix Design method. A minimum of 4 points will be used to establish the mix design results. The oven aging period for Marshall mix design samples shall be 2 hours.

719.3.2.1 Marshall Mix Design: The Marshall Mix Design shall be performed in accordance with the requirements of the latest edition of the Asphalt Institute’s Manual, MS-2 “Mix Design Methods for Asphalt Concrete.” The mix shall use the compactive effort of 75 blows per side of specimen, unless specified otherwise by the engineer. The mix shall comply with the criteria in Table 719-3.

The mix design for PMAC shall be prepared by a laboratory that is accredited through the AASHTO Accreditation Program (AAP) in Hot Mix Asphalt Aggregates and Hot Mix Asphalt. The laboratory shall be under the direct supervision of a Civil Engineer, registered by the State of Arizona, and who is listed by ADOT as a “Qualified Asphalt Concrete Mix Design Engineer” within ADOT’s list of approved laboratories. The date of the design shall not be older than two years from the date of submittal, unless supportive documentation is provided and approved by the Engineer. Mix designs are subject to approval by the Engineer.

TABLE 719-3		
MARSHALL MIX DESIGN CRITERIA		
Criteria	Requirements ½” Mix	Designated Test Method
1. Binder Content, Minimum	6.0% for Arterials and Major Collector 6.2% for other	---
2. Voids in Mineral Aggregate: %, Range	14	AI MS-2
3. Effective Voids: %, Range	4.0±0.2	AI MS-2
4. Absorbed asphalt: %, Range*	0-1.0	AI MS-2
5. Dust to Eff. Asphalt Ratio, Range	0.6-1.4	AI MS-2
6. Tensile Strength Ratio :% Min.	65	ASTM D4867
7. Dry Tensile Strength: psi, Min.	100	ASTM D4867
8. Stability: pounds, Minimum	2,500	ASTM D6926
9. Flow: 0.01-inch, Range,	8	ASTM D6926
10. Mineral Aggregate Grading	---	AASHTO T-27 & T11

* Unless otherwise approved by the Engineer.

** The ratio of the mix design composite gradation target for the No. 200 sieve, including admixture, to the effective asphalt content shall be within the indicated range.

719.4 MEASUREMENT:

Polymer Modified Asphalt Concrete Surface Course (1.5" Thick) will be measured as a unit price bid of ton.

719.5 PAYMENT:

The accepted quantities for Polymer Modified Asphalt Concrete Surface Course (1.5" Thick) measured as provided above, will be paid for at the contract unit price which shall be full compensation for the work, COMPLETE IN PLACE.

45. 727 STEEL REINFORCEMENT, Add the following to MAG Section 727 STEEL REINFORCEMENT:

Description

The work under this item consists of fabrication, furnishing and placing steel reinforcement of the quality, grade, type, size and quantity designated, in conformance with the details on the Project Plans, and in accordance with these special provisions and as directed by the Engineer. All work under this Section shall conform to SECTION 605 – STEEL REINFORCEMENT of the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, 2008 Edition, except as noted herein and on the Project Plans.

Construction Requirements

Section 605-3 of the ADOT Standard Specifications of modified to add:

605-3.05 Shop Drawings:

The Contractor shall submit shop drawings and lists showing the bending of reinforcement bars, splice locations and details and complete manufacturer's information on proprietary splices to the Engineer for review and approval prior to proceeding with the work. Approval of the submittal shall not relieve the Contractor of responsibility for the correctness of the shop drawings and lists.

46. **727 STEEL REINFORCEMENT,** Add the following to **MAG Section 727 STEEL REINFORCEMENT:**

EARLY STEEL PROCUREMENT

Description

The work under this item consists of early procurement of steel reinforcement. All materials furnished under this section shall conform to SECTION 605 – STEEL REINFORCEMENT and SECTION 1003- REINFORCING STEEL of the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, 2008 Edition, except as noted herein and on the Project Plans. This specification does not include placement of the steel.

Bonding and Title

All storage facilities for the rebar shall be bonded and insured to cover the replacement cost of the rebar. All storage facilities shall be located within the State of Arizona. The City shall retain title to the rebar.

Quantity

Rebar must meet the standard for all applications for which it is intended to be used. Quantities have been calculated by the Contractor and no additional payment by the City will be made for additional rebar. Rebar delivered to the site must be in new condition. Any defects from storage shall be remedied by the Contractor at no cost to the City.

Materials

The Contractor shall furnish complete copies, in triplicate, of all mill reports on steel materials furnished.

Storage of Rebar

It is advisable to allocate steel rebar storage a separate area characterized by minimum pedestrian traffic. The rebar stacks should be stored above ground and separated by wooden separators.

If the rebar stacks are to be stored in the open air for more than 2 - 3 weeks, it is recommended to cover them with canvas or dark polyethylene sheets to protect against sunlight, and weather

exposure.

The steel rebar shall be stored separately and clearly marked or tagged with "Property of the City of Phoenix" or other such nomenclature as to identify the owner of the steel.

The steel rebar shall be open for inspection by City inspectors with 24-hour notice at any time.

Measurement and Payment

Payment for the steel rebar shall be considered incidental and the cost being considered as included in the contract price of the concrete structure item.

Payment for the rebar material does not release the Contractor of any responsibility for meeting all testing requirements at the time of installation. Any rebar that does not conform to SECTION 605 – STEEL REINFORCEMENT of the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, 2008 Edition, at the time of installation shall be replaced at the Contractor's expense.

SPECIAL PROVISIONS FOR FIBER OPTICS (ADOT SPECIFICATIONS)

47. SECTION 732 ELECTRICAL UNDERGROUND MATERIAL: modify and revise ADOT Standard Specification 732 as follows:

732-1 Description:

The work under this section shall consist of furnishing and installing conduit, pull boxes, bonding and grounding systems, fiber optic cable systems, cable tray systems, and equipment racks as shown on the project plans or required by the project Special Provisions. The work shall include excavation, installation of conduit, removal of spoils, backfill, compaction of directional drilling and jack and bore pits, warning tape, pull tape, locator wire, connectors and fittings, locating existing conduit when new is to be intercepted with existing, and restoration of the surface to existing condition, including the replacement of decomposed granite and other landscaping items where appropriate.

732-2.01 Electrical Conductors: of the Standard Specifications is modified to add:

Electrical conductors that are left un-terminated shall be coated by a waterproofing method approved by the Engineer. All conductors shall be labeled. Cable marking tags shall conform to the requirements of Subsection 732-2.01 (A). The Contractor shall use durable marking tags that have the ability of being moved along the cables during future alterations.

732 – 2.01(B)(3) IMSA Cable: of the Standard Specifications is modified to add:

IMSA No. 19-1, or approved equal, four Conductor No. 6 AWG shall be used for the switches installed by the project.

All electrical conductors that are left un-terminated shall be coated by a waterproofing method that is approved by the Engineer.

732-3.01 Installation of Electrical Conduit and Pull Boxes: of the Standard Specifications is modified to add:

New pull box shall be installed in accordance with the details shown on the project plans and ADOT ITS Standard Drawings.

Conduits entering pull boxes shall be installed in accordance with the details shown on the project

plans and ADOT ITS Standard Drawings.

Prior to trenching, the Contractor shall verify, with utility record drawing information, the existence of all cathodic protection in all existing utilities and take all possible precautions to maintain existing cathodic protection.

732-3.01 Installation of Electrical Conduit and Pull Boxes: the twentieth paragraph of the Standard Specifications is revised to read as follows:

Conduit ends shall be capped with conduit end cap fittings or plug fittings until wiring or cabling installations are started. When end caps are removed, PVC ends shall be provided with an approved conduit end bell. End bells shall be installed prior to the installation of the conductors. Approved insulated grounding bushings shall be used on steel conduit ends.

732-4 Method of Measurement: of the Standard Specifications is revised to read as follows:

Conductors and cables will be measured by the linear foot for each type and size as follows:

- (A) From center to center of pull boxes;
- (B) From edge of foundation to center of pull box;
- (C) From edge to edge of foundation;
- (D) From end of conduit to center of pull box; and
- (E) From end to end of conduit when no pull boxes are used.

Conductors and cables will be measured as a complete unit of work. This method of measurement shall be used for power and communications conductors, and fiber optic cables shown in the estimate and required on the project plans.

No measurement or direct payment will be made for conductors and cables in poles and pull boxes, the cost being considered as included in the contract price for the pole and pull box items.

Conduit will be measured by the linear foot for each diameter size as follows:

- (A) From center to center of pull boxes;
- (B) From edge of foundation to center of pull box;
- (C) From edge to edge of foundation;
- (D) From end of conduit to center of pull box or foundation; and
- (E) From end to end of conduit when no pull boxes are used.

No measurement or direct payment will be made for vertical conduits and conduit sweeps, conduit in pull boxes, conduit in foundations, clearing and grubbing, trenching, boring, directional drilling, hand digging, potholing, and concrete encasement, the cost being considered as included in the contract price for the conduit and pull box items.

Pull boxes will be measured as a unit for each pull box.

No measurement or direct payment will be made for the use of pulling equipment. If a new pull box is required to be installed in place of an existing pull box, no measurement or direct payment will be

made for removal and disposal of the existing pull box and reconfiguring the conduits entering the pull box as necessary to achieve the minimum bend radius requirements, the cost being considered as included in the contract price for the pull box items.

732-5.0 Conduit: first paragraph of the Standard Specifications is revised to read as follows:

The accepted quantities of conduit, measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for the work, complete in place, including materials, labor, excavation, backfill and compaction, boring, directional drilling, pavement replacement, pavement preservation, saw cutting, conduit, conduit caps/plugs, warning tape, pull tape, locator wire, couplings, fittings, condulettes, expansion fittings, flexible steel conduit, sweeps (36 Inch minimum), hangers, core drilling, replacement of landscaping and irrigation systems, and other work required to return the surface to pre-disturbed condition shall be considered incidental and the cost being considered as included in the contract price for the conduit items.

732-5.04 Pull Boxes: first paragraph of the Standard Specifications is revised to read:

The accepted quantities for pull boxes, measured as provided above, will be paid for at the contract unit price each, which price shall be full compensation for the work, complete in place, including any excavating, backfilling, existing pull box removal, reconfiguring the conduits entering the pull box, and any incidentals necessary to complete the work.

48. **SECTION 732 ELECTRICAL UNDERGROUND MATERIAL:** of the Standard Specifications is modified to add:

ITEM 7320292 ELECTRICAL CONDUIT (2-1.25”):

Description:

The work under this section shall consist of furnishing and installing conduit as shown on the project plans and required by these Special Provisions. The work shall include excavation, installation of conduit, removal and disposal of spoils as required, backfill, compaction of backfill material use for directional drilling and jack and bore pits, warning tape, pull tape, locator wire, connectors and fittings, locating existing conduit when new is to be intercepted with existing, and restoration of the surface to existing condition at no additional cost to the City.

The Contractor shall provide all necessary equipment, labor, and account for the additional construction time required to install the conduit due to the nature of the subgrade material encountered in this area. The Contractor is to determine the installation method (trenching or boring) they see best fit for each area.

Materials:

Polyvinyl Chloride (PVC) conduit and materials shall be in accordance with Section 732-2.02, of the ADOT Standard Specifications.

Unless otherwise shown on the plans, bends, conduit fittings, expansion joints, 36” sweeps and other conduit accessories not specifically mentioned shall be from a material similar to the connecting conduit.

Conduit elbows used for fiber optic cable installations (including future installations) shall be a minimum of 36-inches. All other conduit elbows shall be a minimum of 24-inches.

When the Contractor uses High Density Polyethylene (HDPE) conduit for the installation of below ground PVC conduit, the HDPE conduit shall meet the requirements of the Special Provisions for HDPE conduit listed herein, provide original data sheets or a Certification of Compliance letter from

the HDPE conduit manufacturer to the Engineer stating that the product meets the requirements within these Special Provisions and obtain the written approval from the Engineer prior to procuring and installing the HDPE conduit.

(A) HDPE Conduit:

The Contractor shall use a HDPE conduit with a Standard Dimensional Ratio (SDR) of SDR 11 or SDR 13.5. The HDPE formulations used by the manufacturer must be specifically for conduit applications in accordance with ASTM F 2160: Solid Wall High Density Polyethylene (HDPE) Conduit Based on Controlled Outside Diameter (OD) and ASTM 3035 Polyethylene (PE) Plastic Pipe (SDR) Based on Controlled Outside Diameter. It shall have a cell classification of PE334470C (for black conduit) and PE334470E (for colored conduit) per ASTM 3350: *Standard Specification for Polyethylene Pipe and Fittings Materials*.

The polyethylene base resin shall meet the density requirement and melt index properties described herein. The density shall not be less than 0.940 and not more than 0.955 g/CM³ in accordance with ASTM D 1505: *Standard Test Method for Density of Plastics by the Density-Gradient Technique*. The range for the melt index shall be between 0.05 to 0.5g/10 minutes in accordance with ASTM D 1238: *Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer*. The HDPE conduit shall have a minimum Flexural Modulus, MPa (PSI) of 80,000 per ASTM D 790 and a minimum tensile strength at yield (PSI) of 3,000 per ASTM D-638.

Additives to the base resin shall be included to provide heat stabilization, oxidation prevention and ultraviolet (UV) protection. It shall also utilize carbon black in the range of 2-3% for long term protection against UV degradation. The minimum protection period shall be one year from date of manufacture in unprotected, outdoor storage in accordance with ASTM D 1603: *Standard Test Method for Carbon Black in Olefin Plastics*.

(B) Pull Tape, Locator Wire, and Underground Warning Tape:

Pull tape shall have a minimum tension rating of 2500 lbs. Locator wire and shall be 12 AWG solid copper wire for ITS applications and traffic signal applications.

All empty conduits require a pull tape and locator wire to be installed. The pull tape shall terminate at the bell end of the conduit with 6 feet of coiled slack in each pull box and each locator wire shall be bonded together in each pull box at no cost to the City. In order to prevent pull back into conduit from stretching, Contractor shall let cable rest prior to cutting per manufacturer requirements.

Underground warning tape with locator wire shall be installed above any new conduit path per details in plans. Underground warning tape shall have the words "CAUTION BURIED FIBER OPTIC LINE BELOW" imprinted on the tape at reoccurring intervals.

Construction Requirements:

Conduit shall be placed in accordance with the lines, grades, details and dimensions as shown on the plans or as otherwise approved by the Engineer. If conflicts are encounter with other utilities, the Contractor shall identify, and submit an alternative alignment to the Engineer for review and approval, at no additional cost to the City. All PVC conduits shall be installed in accordance with Section 732-3.01 of the ADOT Standard Specifications, unless noted otherwise on the plans.

Conduit depths shall be a minimum of 36 inches, or as shown on the plans.

Conduit that is direct buried (trenched) shall be backfilled with half sack slurry. The slurry compaction around the conduit shall not cause damage to the conduit. The Contractor shall replace any cracked, broken, chipped or damaged conduit as a result of direct bury slurry at no additional cost to the City.

Where the removal of concrete is required for conduit installation, the Contractor shall remove and replace (in kind) the entire concrete slab(s). Where pavement removal is required for conduit installation, the Contractor shall replace (in kind) the entire area disturbed.

The following subgrade materials may be encountered during trenching or directional drill activities:

- Silty Sand with gravel and cobbles
- Sandy Clay with gravel and cobbles
- Highly fractured basalt
- Clayey sand with gravel
- Well graded sand

The Contractor shall be aware that the subgrade materials encountered are not limited to the above materials.

(A) Difficult Subgrade Conditions:

The Contractor shall provide all necessary equipment, labor, and account for the additional construction time required to install the trenched and directional drilled conduit due to the nature of the subgrade material within the project limits.

Conduit shall be installed a minimum trench depth of 36 inches with half sack slurry backfill. In areas where minimum trench depth requirements of 30 inches cannot be met, the conduit shall be encased in a minimum of three inches of concrete. The conduit shall be supported with masonry block or brick at 10-foot intervals centered under the conduits, during encasement, so that the conduit will be completely encased in concrete.

(B) Plant Material

Alignment of the conduit should try to avoid existing vegetation where possible. Vegetation damaged by construction activities of the Contractor, or its Subcontractors, shall be repaired by the Contractor at no added cost to the City.

All landscape work required as a result of conduit installation shall conform to the requirements of Section 806 of the Standard Specifications. The Contractor shall employ a working foreman qualified and experienced in supervising landscape construction, maintenance, and irrigation systems for the City of Phoenix. Landscape repairs shall be done by a licensed landscape Contractor. All plants cleared shall also be grubbed, regardless of location. Hand digging shall be used in areas where irrigation facilities are present.

All existing plant material that is disturbed during the construction phase shall be replaced with the identical plant species and shall be planted and staked per the original plans to the approval of the Engineer. Replacement plant material shall be 15-gallon container size for all trees and 1-gallon container size for all shrubs. Plantings shall be planted at their original location or at a minimum distance of 3 feet from the centerline of the trench, whichever is greater. The Contractor shall be responsible for replacing landscaping at no cost during the 90 day plant establishment period. The Contractor shall be required to maintain a log (or spreadsheet), open to the City of Phoenix review, detailing when and where vegetation has been planted. As the 90 day plant establishment period ends, the Contractor shall be required to alert the City of Phoenix so the area can be inspected. Failure to alert the City of Phoenix of the end of the 90 day period shall increase the plant establishment period for that area to the actual alert time plus 3 days.

Existing landscaping shall not be left without irrigation-system-supplied water for a period longer than 24 hours. The Contractor shall be responsible for maintaining the healthy condition of all existing plant material and proper function of the water and electrical services affected by construction.

Plant material may be pruned to provide construction access. The pruning shall be performed by trained and experienced landscape personnel. Pruning methods shall be approved by the Engineer prior to pruning being performed.

Irrigation work shall conform to the requirements of Section 808-1 through 808-3 of the Standard Specifications. Restoration and repair of irrigation system shall be considered incidental to conduit installation. A minimum of 50 percent of the irrigation repair crew shall be landscape sprinkler installers.

The irrigation system shall be repaired, flushed, and tested at operating pressure for leaks in the system within 24 hours. The irrigation system shall be repaired with comparable materials, using methods similar to the original installation and approved by the Engineer.

(C) HDPE:

When joining segments of HDPE conduit, the Contractor shall utilize non-corrosive, sit-tight, water-tight couplings. Heat fusion, electrofusion fittings and mechanical connections shall be permitted if the HDPE conduit and joining device manufactures recommendations are observed and the internal diameter of the HDPE conduit is not reduced. Extrusion welding and hot gas welding to join HDPE conduits is not permitted.

Upon completion of joining HDPE conduit sections and setting the pull boxes, the Contractor shall clean the HDPE conduit with compressed air. The Contractor shall demonstrate by pulling a cleaning mandrel or ball mandrel, correctly sized for the conduit, that the conduit was not deformed during installation. If the mandrel passes through the HDPE the Contractor shall install the pull tape and locator wire in accordance with Section 732 of these Special Provisions. If the mandrel encounters a deformity in the HDPE conduit, the Contractor shall replace the entire segment of HDPE between pull boxes with new HDPE at no cost to the City.

(D) Conduit Connections at Existing No.9 Pull Boxes:

The Contractor shall route conduit into existing pull boxes or at other locations shown on the plans. At locations where a spare duct entrance into the pull box is available, the Contractor shall use the available entrance to install the conduit into the pull box. At locations where a spare duct entrance into the pull box is not available, the Contractor shall core drill a conduit entrance per the plan details and these Special Provisions. Conduits that are installed through the core drilled opening shall have a PVC bell end installed to facilitate the Single Mode Fiber Optic (SMFO) cable installation.

The Contractor shall grout the core drilled areas or capped requirements as noted on the plans, around the conduits, with a smooth concrete finish. Grouting components shall be mixed in strict compliance with the manufacturer's recommendations.

If spalling is observed during the core drilling operation the Contractor shall notify the Engineer for mitigation measures. The extent of the repair area will be marked by the Engineer and will be no less than three inches outside the area of delamination. The Engineer will be the final authority if questions arise in regards to the need for patching or the extent of a required patch.

Concrete within the patch area shall be broken out, to the minimum depth specified by the manufacturer for the patch material being used, with light to medium pneumatic tools until sound clean concrete is exposed.

Prior to patching, the exposed faces of the concrete shall be sandblasted free of loose particles, oil, dust, traces of concrete and other contaminants. Prior to the placement of the bonding agent, all sandblasting residue shall be removed with compressed air and high suction vacuums. Sand for sandblasting shall be sharp and clean and capable of passing a No. 10 sieve and shall leave the

exposed concrete face clean and dry.

The surface of the spalled area shall be clean and dry so that the patching material will form a proper bond. The area to be cleaned and patched shall be limited to the area designated by the Engineer. Patching materials shall be confined to the limits of the repair and shall not lap onto the surrounding pull box infrastructure.

The patch shall be finished to the cross-section of the existing pull box. The patch surface shall be struck off flush with the existing pull box surface.

(E) Acceptance:

No more than one week prior to installation of any cable, all new and existing empty conduit runs in which cable is to be installed shall be cleared/cleaned prior to by pulling through a metal-disc mandrel with a diameter of 90% of the PVC conduit diameter, or a ball mandrel with a diameter of 80% of the HDPE conduit diameter. The conduit may be brushed or swabbed or pumped to remove water, if deemed necessary, prior to pulling the mandrel through the conduit.

Pull tape for cable pulling shall be added to all proposed conduit pathways (new or existing) to facilitate the cable installation.

(F) Geospatial Deliverables:

Once the conduit has been installed or partially installed The City of Phoenix will require the contractor to survey the actual location of the conduit path. This data will be used for input into The City of Phoenix Fiber Network GIS System.

The surveyed path will be collected in segments between access points. Each manhole, handhole, vault will be surveyed as individual points and identified with a City of Phoenix number.

All surveys will have a horizontal and vertical accuracy level of +/- one foot. The survey will be provided to The City of Phoenix in Arizona State Plane Central Zone NAD 83/NAVD 88 International Feet.

Deliverables will include:

1. CSV file of all collected points in a Northing, Easting, Elevation, Description format.
2. AutoCAD 2019 3D file of the surveyed conduit path.

Method of Measurement:

Conduit will be measured by the linear foot by each diameter size combination, from center to center of pull boxes, or center of pull box to center of foundation. Each item shall include all elements of installation as described below.

No measurement or direct payment will be made for clearing conduit (new or existing) and installation of pull tape, the cost being considered as included in the contract price for the conduit items.

No measurement or direct payment will be made for vertical conduits, conduit sweeps, conduit in pull boxes, conduit in foundations, clearing and grubbing, removal and disposal of spoils, directional drilling and jack and bore pits, warning tape, couplings, expansion fittings, connectors, half sack slurry, backfilling and compacting, bonding and grounding, grouting, spall repair, pavement patching, irrigation system repair, replacement of any landscape vegetation damaged during installation activities, or other work required to return the surface to pre-disturbed condition, the cost being considered as included in the contract price for the conduit items.

The Contractor is alerted to the fact that hand digging may be required in the installation of trenches and pull boxes. No measurement or direct payments will be made for hand digging, the cost being considered as included in the contract price for the conduit and pull box items.

No measurement or direct payment will be made for additional equipment, labor, and construction time required to install the conduit due to the nature of the subgrade material encountered or the existing locations of utilities in the area, the cost being considered as included in the contract price for the conduit items.

The work shall include excavation, installation of conduit, removal and disposal of spoils as required, backfill, compaction of backfill material use for directional drilling and jack and bore pits, warning tape, pull tape, locator wire, connectors and fittings, bonding and grounding, locating existing conduit when new is to be intercepted with existing, and restoration of the surface to existing condition at no additional cost to the City.

If used, the HDPE conduit shall be measured and paid at the unit bid price of the **PVC** conduit(s).

Basis of Payment:

The accepted quantities of conduit, measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for the work, complete in place, including materials, labor, excavation, backfill and compaction, boring, directional drilling, pavement replacement, saw cutting, conduit, conduit caps/plugs, warning tape, pull tape, locator wire, couplings, fittings, condulettes, expansion fittings, flexible steel conduit, sweeps (36 Inch minimum), hangers, core drilling, replacement of landscaping and irrigation systems, and other work required to return the surface to pre-disturbed condition shall be considered incidental and the cost being considered as included in the contract price for the conduit items.

Additional equipment, labor, and construction time required to install the trenched or directionally drilled conduit due to the difficult nature of subgrade material encountered is considered included as part of the conduit pay items.

Additional materials, equipment, and labor for concrete encasement of trenched conduit due shallow installation depths is considered included as part of the conduit pay items.

49. SECTION 732 PULL BOX of the ADOT Standard Specifications is modified to add:

ITEM 7320450 PULL BOX (NO. 8) (PHOENIX):

ITEM 7320460 PULL BOX (NO. 9) (PHOENIX):

Description:

The work under this item shall consist of furnishing and installing pull boxes as shown on the project plans. The work shall include excavation, installation of pull boxes, installation of rack and hook system for No. 9 pull box, backfill, compaction, conduit sweep adjustments, and restoration of the surface to existing condition, including decomposed granite and other landscaping, irrigation systems, concrete surfaces, and roadway surfaces.

Materials:

The pull box, covers, and extensions shall meet structural requirements for AASHTO Specification HS20-44 loads and as shown on the project plans. A certificate of compliance, in accordance with Section 106.05 of the Standard Specifications shall be supplied for structural capabilities and materials used in manufacture.

New pull boxes installed to replace existing pull boxes shall be a split No. 9 pull box installed over

existing conduit and fiber, as shown in project plans.

Concrete pull boxes are not permitted. Concrete polymer boxes shall be used.

(A) Covers:

The wording on the City of Phoenix No. 8 and No. 9 pull box covers shall read, "CITY COM" in two-inch letters.

The No. 9 pull box cover shall have a square, hinged cover that opens a full 180 degrees. Opening of the cover shall be spring assisted from both the open and closed positions via a torsion bar lift system. The cover shall lock down with at least one stainless steel penta-head bolt that shall be captive to the cover. The cover shall also have provisions for an externally mounted padlock for extra security. The padlock shall mount in a cavity in the pull box cover so no part of the padlock is exposed.

(B) Cable Mounting Hardware:

Each No. 8 pull box shall be supplied with two 36" cable rack rails installed on the side walls of the pull box, with four 7.5" large cable rack hooks, as shown on the plans. Shop drawings for the rack and hook system shall be submitted to the Engineer for approval. The installation method of the rack and hook system and details of how the Contractor proposes to use the rack and hook system to support cable slack shall be included in the shop drawings.

Each No. 9 pull box and split No. 9 pull box shall be supplied with six unistrut embedded in the concrete walls of the pull box, with a 24" 18-hole rack mounted to each unistrut with two ½"-spring nuts and bolts, as shown on the plans. Eight 5" hooks that mount in the 18-hole racks shall be supplied. Shop drawings for the rack and hook system shall be submitted to the Engineer for approval. The installation method of the rack and hook system and details of how the Contractor proposes to use the rack and hook system to support cable slack and fiber optic splice closures shall be included in the shop drawings.

Construction Requirements:

The construction requirements shall be in accordance with Section 732-3 of the ADOT Standard Specifications, per the details shown in the project plans, and as specified herein.

Pull boxes shall be installed flush with adjacent grade, roadway, or sidewalk. Pull boxes shall not be installed in roadways, driveways, parking areas, ditches, or sidewalk ramps unless otherwise noted on the plans or directed by the Engineer.

The Contractor shall be responsible for restoring the surrounding surface conditions back to their original state, including concrete and roadway areas.

Prior to any trenching, the Contractor shall verify, with utility as-builts, the existence of any cathodic protection in all existing utilities and take all possible precautions to maintain existing cathodic protection.

After Blue Staking has been accomplished, the Contractor shall mark the proposed pull box location with white paint prior to excavation. Above ground pull box locations shall be marked with tape. The pull box locations must then be approved by the Engineer before installation begins.

When installing the No. 9 pull box and pull box covers, the Contractor shall only lift the pull box and covers using the lifting hardware installed for that purpose. The cover shall be oriented such that the cover hinge lies along the side of the pull box with no conduit openings farthest from the roadway.

The pull box shall be backfilled with select excavated material and thoroughly compacted to within two inches of original grade. The compaction around the box shall not cause the sides to deflect or any part of the box or cover to crack or become dented. The Contractor shall replace any cracked, broken, chipped or damaged pull boxes or covers at no additional cost to the City.

At locations where the contractor is required to remove and replace an existing pull box, install a new pull box over an existing conduit system, or make conduit sweep adjustments into a pull box, the contractor shall be required to hand dig or chip away the existing concrete encasement to locate the existing conduits and to achieve the required conduit sweeps into the pull box. The contractor shall remove the concrete encasement in such a manner that it will not damage the conduit system and its contents. The contractor shall replace cracked, broken, chipped, or damaged conduit and conduit contents at no additional cost to the City.

Method of Measurement:

New No. 8 and No. 9 pull boxes will be measured as a unit each for a pull box and cover satisfactorily installed.

Pull boxes and pull box covers damaged and replaced during construction shall not be measured.

Basis of Payment:

The accepted quantities of each No. 8 and No. 9 pull box, as measured, above will be paid at the contract unit price, complete in place, including racks and hooks for cable mounting, excavating, backfilling, conduit in pull boxes, grouting and sealing conduits entering through the side walls and area restoration.

50. Add the following new **Section 732 FIBER OPTICS** as follow:

ITEM 7320654 FIBER OPTIC EQUIPMENT (BREAK-AWAY CONNECTION SYSTEM):

Description:

Break-Away Connector System:

The Contractor shall furnish, install, and test break-away connector systems at traffic signal cabinet locations as shown in the project plans.

Materials:

Fiber Optic Break-Away Connector System:

The break-away connector system shall be the CSP FiberShear Controlled Shear Point fiber termination device. Configuration options shall be as follows:

CSP1 with drop cable and 3.0 mm Outdoor Rated breakout equipment interface cable
12-fiber pigtails, each with factory terminated SC type connectors
Concrete Pedestal Mount Configuration (PM)

Drop cable lengths shall be determined by the Contractor in 50-foot increments to pre-order for each break-away connector systems location required on the plans.

Construction Requirements:

Break-Away Connector System:

The Contractor shall install the break-away connector system to be anchored directly over the

entrance to seal the conduit or the CSP can be anchor mounted adjacent to the conduit hole.

At the pull box locations shown in the project plans, the Contractor shall perform the required backbone cable fusion splicing between the 12-fiber branch cable(s) from the break-away connector system and the trunk cable. All splices shall be prepared in accordance with the manufacturer's recommendations. Each splice shall introduce less than 0.3 dB attenuation.

Testing:

See fiber optic testing requirements as they apply to the fiber cables connected to the break-away connector system items.

Method of Measurement:

Break-Away Connector System:

Fiber optic break-away connector system will be measured as a unit each for a break-away connector system furnished, installed and tested, complete in place.

Basis of Payment:

Break-Away Connector System:

The accepted quantities of fiber optic break-away connector system, measured as provided above, will be paid at the contract unit price each, which shall be full compensation for the work, complete in place, including splicing and terminating cables, lubricant, labels, jumper cables, and testing.

51. Add the following new **Section 732 FIBER OPTICS** as follow:

ITEM 7320787 SINGLE MODE FIBER OPTIC CABLE (144 FIBERS):

ITEM 7320794 FIBER OPTIC SPLICE CLOSURE (PHOENIX):

Description:

(A) Single Mode Fiber Optic Cable:

The Contractor shall furnish, install, splice, terminate, and test Single Mode Fiber Optic (SMFO) communications cables in conduits between pull boxes, junction boxes, traffic signal cabinets and buildings as shown on the plans.

(B) Fiber Optic Splice Closure (Phoenix):

The Contractor shall furnish, install, and test fiber optic splice closures at City of Phoenix locations shown in the project plans.

Materials:

(A) Single Mode Fiber Optic Cable:

The Contractor shall supply SMFO cable that meets the following specifications:

(1) Documentation:

The Contractor shall provide certificates in accordance with Section 106.05 that the cables furnished and installed are in conformance with the appropriate specifications. These certificates shall be in two parts:

The Contractor shall secure a Certificate of Compliance from the cable manufacturer that the cable is in conformance with the Rural Electrification Administration (REA) Bulletin PE-90 (where applicable) and these Special Provisions.

The Contractor shall provide a Certificate of Analysis certifying that the installation of the communications cabling system is in accordance with the cable and splice manufacturer's recommendations and these Special Provisions.

(2) Technical Requirements:

All fiber optic cable shall be SMFO cable that is of loose tube construction, filled with a water-blocking material, and constructed by a certified ISO 9001 or 9002 manufacturer. Fiber optic cable shall be dielectric and comply with the requirements of REA PE-90 except as modified by the following requirements:

Number of fibers:	144 (for Phoenix), or as specified in the project plans
Minimum Buffer Tube Diameter:	2.5 mm
Cladding diameter:	125 ±1.0 μm
Core-to-cladding offset:	≤0.8 μm
Cladding non-circularity:	≤1.0%
Maximum attenuation:	≤0.35 dB/km at 1310 nm, ≤0.25 dB/km at 1550 nm
Microbend attenuation (1 turn, 1.25" dia.):	≤0.5 dB at 1550 nm
Microbend attenuation (100 turns, 3' dia.):	≤0.05 dB at 1310 nm
Mode-field diameter (matched cladding):	9.3 ±0.5 μm at 1310 nm; 10.5 ±1.0 μm at 1550 nm
Maximum chromatic dispersion:	≤3.2 ps/(nm x km) from 1285 nm to 1330 nm and <18 ps/(nm x km) at 1550 nm
Fiber polarization mode dispersion:	≤0.5 ps/(km) ^{1/2}
Fiber coating:	Dual layered, UV cured acrylate
Coating diameter:	245 μm ±10 μm
Minimum storage temperature range:	-40°F to 158°F
Minimum operating temperature range:	-40°F to 158°F
Rated life:	Certify a 20-year life expectancy when installed to manufacturer's specifications

Buffer Tubes: Each buffer tube shall be filled with a dry water-blocking material that provides for an efficient and craft-friendly cable preparation.

Buffer tubes shall be stranded around a central member using the reverse oscillation or "S-Z", stranding process. Filler rods shall be used in the fiber optic cable to lend symmetry to the cable section.

Central Strength Member: The fiber optic cable shall have a central strength member designed to prevent buckling of the cable.

Cable Core: The fiber optic cable shall utilize a dry water-blocking material to block the migration of moisture in the cable interstices.

Tensile Strength Members: The fiber optic cable shall have tensile strength members designed to minimize cable elongation due to installation forces and temperature variation.

The fiber optic cable shall withstand a 600 lbf tensile load where the change in attenuation does not exceed 0.2 dB during loading and 0.1 dB after loading. The cable shall be rated for an installed tensile service load of 200 lbf, or not to exceed the maximum tensile strength characteristics of the cable being pulled, whichever one is the more stringent requirement shall apply.

Cable Jacket: The fiber optic cable jacket shall be constructed of a high or medium density polyethylene (HDPE/MDPE) jacket that has been applied directly over the tensile strength members and water-blocking material. The jacket shall have at least one ripcord designed for easy sheath removal.

The cable shall be wound on the reel in such a manner as to provide access to both ends of the cable to enable testing to be performed while the cable is on the reel.

Environmental: The cable shall be capable of withstanding the following conditions without damage or decrease in function:

- a) Total immersion in water with natural mineral and salt contents; and
- b) Wasp and hornet spray.

The Contractor is only required to order as many connectors as is necessary to meet the communications requirements shown in the Plans.

Connectors shall not introduce more than 0.5 dB attenuation per connector. Connectors found to exceed 0.5 dB attenuation shall be remade at no additional cost, until this requirement is met.

(B) Fiber Optic Splice Closure:

Fiber optic splice closures shall be either shell design or cylindrical, butt-end style corrosion resistant, and watertight, and meet the requirements of GR-771-CORE. Underground splice closures shall seal, bond, anchor, and provide efficient routing, storage, organization, and protection for fiber optic cable and splices. The splice closure shall provide an internal configuration and end cap with a minimum of two express ports for entry and exit of backbone cable and a minimum of three additional ports for distribution and branch cables.

Splice closures shall be designed to accommodate heat-shrink fusion splice trays in sufficient quantities to perform the required number of splices. At a minimum, the fiber optic splice closure shall accommodate 156 splices and three 12-fiber branch cables. Each splice closure shall be supplied with at least two spare heat shrink fusion splice trays and the hardware to terminate at least two additional branch cables.

Splice closures shall have a reliable dual seal design with both the cable jackets and core tubes sealed with compressed gel block or without the use of water-blocking material. The splice closures shall be capable of being opened and completely resealed without loss of performance.

The splice closure maximum dimensions shall not exceed 25" L x 11" W.

Construction Requirements:

(A) Single Mode Fiber Optic Cable:

The cable shall not be installed in any pull box until the pull box has been approved for cable installation by the Engineer.

Installation of each fiber optic cable shall be continuous and without splices between allowable splice points as identified on the plans. The Contractor shall perform all final length measurements and order cable accordingly.

The backbone cable fibers shall be un-connectorized. The backbone cable fibers shall only be spliced to the following as shown on the plans:

- Other backbone cables

- Branch cables
- Factory pre-terminated color-coded fiber pigtails within a fiber termination panel

Branch cables shall be connectorized with male SC-Type connectors as required.

No more than one week prior to installation of any cable, all new and existing empty conduit runs in which cable is to be installed shall be cleared/cleaned by pulling through a metal-disc mandrel with a diameter of 90% of the PVC conduit diameter, or a ball mandrel with a diameter of 80% of the HDPE conduit diameter. The conduit may be brushed or swabbed or pumped to remove water, if deemed necessary, prior to pulling the mandrel through the conduit. No measurement or payment shall be made for clearing existing conduit for use by this project, as it is considered included in the cost of contract items.

Where cable is pulled through pull boxes, the Contractor shall ensure that the cable is protected from sharp edges and excessive bends. The Contractor shall not cause the cable to violate the minimum bending radius for which the cable was designed. If the Contractor violates the bending radius, the entire length of cable from the previous splice point shall be removed from the project and a new cable shall be pulled at no cost to the City.

Cables shall be pulled in the conduit with a device designed to provide a firm hold on the exterior covering and the central strength member of the cable. It is preferred that power winches or mechanical advantage devices are used to pull all fiber cable. Pulling the cable by truck, backhoe, or any other non-approved pulling device shall be avoided and will not be accepted by the City. Cable shall not drag on the ground or pavement during installation. The Contractor shall ensure that the tensile load on the cable does not exceed the allowed maximum by using a break-away tension limiter set below the recommended tensile limit of the cable being pulled and/or a system that provides a means of alerting the installer when the pulling tension approaches the limit.

A pull tape and locator wire shall be installed into the conduit along with the SMFO cable. Pull tape installed shall provide a minimum tension rating of 2500 lbs. Locator wire installed shall be 12 AWG solid copper wire. The locator wire shall be connected at each pull box using wire nuts to form a continuous circuit for the length of the installed fiber.

During pulling, the cable shall be lubricated at each No. 9 pull box. The Contractor shall use a pre-lubrication or continuous lubrication method. The lubricant used shall be compatible with the cable jacket as recommended by the cable manufacturer. Liquid detergent shall not be used. The cost of this lubricant is included in the contract items. Lubricant quantity for each pull shall be as follows:

$$Q = 0.0008 \times D \times L$$

where,

Q is the quantity of lubricant in gallons

D is the diameter of the conduit in inches

L is the length of the pull in feet

The Contractor shall supply documentation identifying either the manufacturer's recommendation or a published standard recommending the maximum pulling tension and speeds and these values shall not be exceeded. The Contractor shall have this documentation on site during each pull. If the Contractor fails to continuously lubricate the cable, the work shall be stopped until a meeting is held between the Contractor and the Engineer to discuss why the terms of this specification are not being met. No compensation for the work stoppage shall be given.

Where cables are to be installed in conduit with existing cables or wires that shall remain, the Contractor shall not damage the existing cables or wires. The Contractor shall disconnect, remove, reinstall, and reconnect the existing cables and wires as necessary to facilitate the installation of the new cable. The Contractor shall be responsible for any damage to the existing cables or wires caused by this operation. New and existing conductors shall be terminated and labeling reconciled as

needed. Two weeks prior to disconnecting any existing cables, the Contractor shall submit a schedule, for approval by the Engineer, with the timeframes of when the existing cables are to be disconnected. No separate payment will be made, as this work shall be considered included in the cost of associated items.

In all locations where fiber enters a No. 9 pull box (existing and new), 50 feet of cable slack for each entry of SMFO cables (i.e., a cable that passes through a No.9 pull box shall have 100 feet of cables slack, 50 feet for each entry point) and shall be loosely looped using the rack and hook system. Each cable shall be attached to the rack and hook system with industry standard Velcro wraps for each individual cable loops of one cable immediately upon entering the box. Velcro wraps should be tightened so that they prevent cable slippage but do not deform or damage the cable sheath.

In all locations where fiber enters a No. 8 (for Phoenix) pull box, 25 feet of cable slack shall for each entry of SMFO cables (i.e., a cable that passes through a No. 8 or 7E pull box shall have 50 feet of cables slack, 25 feet for each entry point) and be loosely looped inside the No. 8 (for Phoenix) pull box. Each cable shall be tied with industry standard Velcro wraps for each individual cable loops of one cable immediately upon entering the box. Velcro wraps should be tightened so that they prevent cable slippage but do not deform or damage the cable sheath.

When splice closures are required at No. 9 pull boxes, 50 feet of cable slack for each entry of 144, 48, or 12 SMFO cables entering the pull box shall be provided between the splice closure and each point where the cable enters the pull box, allowing the splice closure to be removed up to 50 feet from the pull box in order to perform the splice in an environmentally controlled splice, unless a greater distance is noted on the project plans.

When break-away connector systems are required at pull boxes, 50 feet of cable slack for all cables entering the pull box shall be provided between the break-away connector system and each point where the cable enters the pull box, allowing the break-away connector system to be removed up to 50 feet from the pull box, unless a greater distance is noted on the project plans.

The Contractor shall submit machine-printed permanent identification tags or labels, and the method of attachment, for approval by the Engineer. Cables shall be labeled at all pull boxes where cable is exposed. As a minimum, the labels shall state what fiber cable (SMFO-12/SMFO-48/SMFO-144), and the To/From direction. A complete labeling record in the form of an as-built cable schedule shall be provided to the Engineer with the final documentation. The cabling record shall include the distance markings on all fiber optic cables at the ingress and egress points of the pull boxes, at the splice closures, entry to cabinets/buildings and at fiber termination points.

After cables are installed, the Contractor shall seal all pathway entrances with an approved, material plug (foam is not allowed) to prevent ingress of water, dust or other foreign materials.

(B) Fiber Optic Splice Closure (Phoenix):

The Contractor shall install the splice closure in No. 8 pull boxes (for Phoenix) as shown on the plans. The Contractor shall install the splice closure such that the two trunk cable entries are on the same side of the end cap so if other branch fiber cables are installed at a later date, the two existing seals remain undisturbed.

Where the Contractor is splicing to existing fiber, the Contractor shall be careful to not disturb any other splices that exist. Splices that are damaged shall be repaired by the Contractor immediately, at no cost to the City.

Splicing of the SMFO cable shall be done only at the pull boxes shown on the project plans. All splices and connectors shall be prepared in accordance with the manufacturer's recommendations. All splices shall be fusion spliced and shall not introduce more than 0.1 dB attenuation per splice. Splices found to exceed 0.1 dB shall be re-spliced at no additional cost, until this requirement is met.

Each splice shall be packaged in a protective heat-shrink sleeve and secured in the splice tray. The heat-shrink sleeve shall be approved for use by the fiber optic cable manufacturer and shall protect the fiber from scoring, dirt accumulation, moisture intrusion, and micro-bending.

Testing:

Fiber optic cable shall meet the following test requirements.

(1) Test Plan:

The Contractor shall prepare a fiber cable test plan. The fiber cable test plan shall indicate which cables are to be tested, where testing is to occur, the anticipated dates of testing, the testing methodology and outputs, and the coordination required with City staff to conduct the testing.

The Contractor shall submit the fiber cable test plan to the City within thirty (30) days after the start of the project and shall revise the fiber cable test plan to address City comments on the test plan. No fiber cable testing shall occur until after the City has approved the fiber cable test plan.

(2) Pre-Installation Testing:

The Contractor shall inspect all cable upon delivery and again prior to installation. The Contractor shall test the SMFO cable using an optical time-domain reflectometer (OTDR) per the following OTDR Tests section prior to installation.

(3) Post-Installation System Acceptance Testing:

After installation and splicing of cable the Contractor shall perform the following System Acceptance Tests:

- **Power Meter Tests:** Install power source feed through connectors at all locations where fibers are to be connectorized to connect to communications equipment. Conduct power meter tests for each fiber to demonstrate splice continuity and attenuation from origin to destination. Demonstrate that the attenuation for each fiber path including connectors, and splices as a whole, complies with the loss budgets required by these Special Provisions. Submit a test result and check-off sheet of each fiber to the Engineer.
- **OTDR Tests:** Conduct bi-directional tests using an OTDR for each newly installed fiber. Demonstrate that the attenuation for each fiber and splice, individually and as a whole, comply with the loss budgets required by these Special Provisions. Test fibers at 1310 nm and 1550 nm using a launch cable no less than three times the pulse width used to shoot the cable. Submit OTDR trace source files for approval to the Engineer. Clearly annotate each splice and identify the measured loss.

The Contractor shall identify any unacceptable losses greater than 0.5 dB and make corrective actions at no additional cost. Failed splices may be remade and re-tested for compliance. The Contractor shall replace any cable in its entirety that is not compliant with these Special Provisions at no additional cost.

Following completion of all testing, and approval by the City, the Contractor shall compile and submit two copies of organized test notebooks in electronic form. These notebooks shall include a test summary sheet that includes, at a minimum, the power meter test results and the OTDR trace source files of each fiber strand in native format, with accompanying software to read the source files, where necessary.

Method of Measurement:

(A) Single Mode Fiber Optic Cable:

The SMFO cable will be measured by the linear foot for each type of cable furnished and installed. Cable will be measured horizontally along the route from center of pull box to center of pull box, or center of pull box to center of foundation. Conduit brushing, swabbing, or pumped to remove water out of and mandrelling, is considered incidental and included and will not be measured. Activities involved to disconnect, remove, reinstall, and reconnect the existing cables and wires as necessary to facilitate the installation of the new cable are considered incidental and included and will not be measured.

No measurement will be made of cable that is below ground in vertical conduit stub-ups or for slack cable in pull boxes.

(B) Fiber Optic Splice Closure (Phoenix):

Fiber optic splice closures will be measured as a unit each for a splice closure furnished, installed and tested, complete in place. The installation shall include the splice closure and all incidental splice trays, closure and accessory kits, cables, connections and hardware.

Basis of Payment:

(A) Single Mode Fiber Optic Cable:

SMFO cables, measured as provided above, will be paid at the contract unit price, which shall be full compensation for providing the various type of cable, complete in place, including splicing and terminating cables, pull tape, lubricant, labels, conduit (including conduit brushing, swabbing, water pumping, and mandrelling), sealing, and testing which are considered incidental and the cost to be included in this item. No payment for fiber optic cable slack and equipment to install the cable, including equipment to limit pull-tension and speed will be made and are considered to be incidental and the cost is to be included in the cost of this item. No payment for activities involved to disconnect, remove, reinstall, and reconnect the existing cables and wires as necessary to facilitate the installation of the new cable will be made and are considered incidental and included and the cost is to be included in the cost of this item.

(B) Fiber Optic Splice Closure (Phoenix):

The accepted quantities of fiber optic splice closures, measured as provided above, will be paid at the contract unit price each, which shall be full compensation for the work, complete in place, including splicing and terminating cables, lubricant, labels, splice trays, closure cleaning and sealing, pigtailed, jumper cables, and testing.

52. Add the following new **SECTION 737 FIBER OPTIC EQUIPMENT (PHOENIX FIELD HARDENED ETHERNET SWITCH)** as follow:

Description:

The work under this item includes furnishing and installing Ethernet field switches in the traffic signal control cabinets shown on the plans.

Materials:

The Hardened Managed Ethernet switch shall be the EX78934X-0VB for City of Phoenix traffic signal cabinets. Configuration options shall be as follows:

- 2 10GB 10KM SFP – SRPTIS10M
- 16 PORT 10/100TX + 2 GIGABIT PORT 1000LX 20KM WITH SC TYPE CONNECTORS
- SC. DIN RAIL
- TERMINAL BLOCK (12-48VDC) OR DC JACK POWER CONNECTOR
- 1 EPOW 54-600 POWER SUPPLY with the following features:
 - HARDENED EXTERNAL, 100-240VAC INPUT
 - TS2 RATED
 - 12VDC OUTPUT
 - TERMINAL BLOCK

Prior to construction, the Contractor shall coordinate installation with City traffic signal staff. The Ethernet field switches shall be compatible with the current City of Phoenix ITS network management software. All materials provided shall be new stock. Refurbished or resold materials shall not be acceptable. All materials shall be currently supported by the manufacturer, in current production and not scheduled for end of life.

Construction Requirements:

Minimum requirements for the Contractor or designated Subcontractor involved in integrating the network and testing the network are:

- Three years of experience in network installation, testing, and troubleshooting
- Two years of experience in the installation of ITS networks using VLANs and Internet Group Management Protocol (IGMP).

Contractor shall meet all applicable codes and standards requirements for all external wiring to the Ethernet field switches.

The Contractor shall be responsible for programming the Ethernet field switch. This includes ensuring that the configuration of each uplink port connecting to neighboring switches is trunked allowing multiple VLANs to pass. The City will provide IP addresses, netmasks, gateways, port assignments, VLAN configuration, NTP server and other required information assigned to each Ethernet field switch location which shall be used for configuration. The Contractor will apply all available firmware upgrades to the Ethernet field switch. The Contractor shall configure the Ethernet field switches with City-provided IP addresses, location identifiers, subnet and gateway information, and mount the Ethernet field switches in the traffic signal control cabinets.

The City shall provide the Contractor a list of IP addresses assigned to each Ethernet field switch location which shall be used for configuration.

The Contractor shall provide a list of each Ethernet field switch MAC address and associated location to the City. The Contractor shall configure the networked devices per the approved network configuration parameters.

The Contractor shall label the Ethernet field switch with a printed heat resistant label. The label shall consist of the controller cabinet intersection location and IP address.

The Contractor shall submit permanent identification tags or labels, and the method of attachment, for approval by the Engineer. Each jumper cable shall be labeled at both ends where the cable connects to the electronic device within the cabinet or building. Jumper cables should be looped independently of one another when providing cable slack and Velcro wraps shall be installed for each individual cable loops of one cable. Velcro wraps should be tightened so that they prevent cable slippage but do not deform or damage the cable sheath. Cable strain relief brackets shall be provided to protect the cable and its connector from accidental damage, near the point of connection at each end of the jumper cable. All wires and cables shall be neatly installed (coiled) and secured with Velcro wraps per common practices and standards. The Contractor shall provide

a service loop at all connection points. All factory caps and plugs removed from the Ethernet field switch shall be stored safely within the traffic signal cabinet for later use.

Testing:

The Contractor shall prepare an Ethernet field switch test plan for each of the required tests (i.e., standalone, subsystem testing, and/or SAT). The Ethernet field switch test plan shall include pass or fail testing steps for each functional requirement of the Ethernet field switch and network configuration, indicate which switches are to be tested, where testing is to occur, the anticipated dates of testing, how connectivity between the Ethernet switches in the traffic signal control cabinets and the City Traffic Management Centers will be verified, the testing methodology and outputs, and the coordination required with respective City staff to conduct the testing.

The Contractor shall make corrective actions, as necessary and appropriate for any corresponding testing step that failed, and re-test as necessary until successfully passing all the testing steps within the test procedures, prior to proceeding to the next required test (i.e., subsystem testing or SAT).

The Contractor shall replace any installed component, or system of components in its entirety and reconfigure the network, as necessary, as part of the corrective actions for passing the required tests and to be in compliance with the contract documents at no additional cost.

The Contractor shall submit the Ethernet field switch test plan to the City within thirty (30) days after the start of the project and shall revise the Ethernet field switch test plan to address City comments on the test plan. No Ethernet field switch testing shall occur until after the respective City has approved the Ethernet field switch test plan.

The System Acceptance Test for the Ethernet field switch shall consist of respective City staff executing a standard 'ping' test, demonstrating connectivity to the management interface of the Ethernet field switch and each and every device connected as well as viewing and operating devices connected (e.g., CCTV cameras, traffic signal controller).

Ethernet network switches require the following tests:

(A) Stand-Alone Testing:

The Contractor shall confirm the installed Ethernet network switch power cord and ground wire is properly connected and all ports are properly configured.

The Contractor shall confirm the Ethernet surge protection devices and jumper cables between the Ethernet network switch and industrial grade Ethernet cables are installed and properly connected, including the ground wires.

The Contractor shall confirm the latest software/firmware updates have been downloaded and installed.

(B) Subsystem Testing:

The Contractor shall demonstrate proper operation (power and network connection) of each end device connected (CCTV PTZ camera or gigabit radio) and proper operation of the network connection to the TMC workstation and server.

The Contractor shall confirm all ITS LAN devices are configured and integrated per the approved configuration parameters.

For each alternate path provided within the ITS LAN, the Contractor shall create a fault condition

and demonstrate that the network automatically re-routes network traffic through the path that doesn't have the fault condition.

The Ethernet network switch and all its connected network devices shall successfully maintain stable performance, and reliable communications for 72 consecutive hours without disruption to the operation of the network and connected devices.

(C) System Acceptance Testing (SAT):

The Ethernet network switch, ITS LAN configuration and all its connected network devices shall successfully maintain stable performance, and reliable communications for 30 consecutive calendar days without disruption to the operation of the network and connected devices.

Method of Measurement:

Measurement will be per each Ethernet field switch furnished, installed, tested and accepted. Ethernet surge protection devices, DIN rails, mounting assemblies, ground wires, power cords, jumper cables, identification tags/labels, Velcro wraps, strain relief brackets, RJ-45 connectors, network configuration, and area restoration necessary to complete the work will not be measured.

Basis of Payment:

The accepted quantities of Ethernet field switches, measured as provided above, will be paid at the contract unit price each, which shall be full compensation for all labor, materials, tools, equipment, testing and incidentals for purchasing, transporting, storing, installing, testing and accepting the switches, complete in place.

53. Add the following new **ITEM 7370455 MISCELLANEOUS ELECTRICAL (AS-BUILT DRAWINGS):**

Description:

The Contractor shall maintain a comprehensive set of documentation as it related to the project work elements. The documentation shall include: (A) current as-built red lines made to the construction plans, and (B) final as-built redlines and all other documentation materials.

Materials:

(A) Project Documentation:

Concurrent as-built documentation of the work shall be kept current (no longer than 7 calendar days behind actual work period) throughout the duration of the project. A full size set of project plans shall be kept on-site and updated on a weekly basis with a red pencil or red ink to reflect field adjustments, changes, omissions, additions, etc. as they occur on the project. The Engineer will provide the contractor with a full-size set of plan sheets for use in preparing final construction record drawings. This concurrent documentation shall be provided by the Contractor prior to initiation of any System Acceptance Test.

Documentation includes as a minimum:

- Construction red line plans noting the actual as-built condition
- Directional Drill Profiles – Planned - Actual
- Foldout flats/butterfly drawings of each No. 7E, No. 8 and No. 9 pull box utilized in this project
- A complete labeling record in the form of an as-built cable schedule
- Operator's manuals

- Maintenance procedures, manuals
- Communications and operating protocols
- Factory issued manuals
- Detailed shop drawings
- Certifications
- Warrantees
- Instruction sheets
- Parts lists

Documentation shall also include manufacturer's equipment documentation for all Contractor-furnished items. Acceptable factory manuals must contain technical, diagnostic, and maintenance (preventive and troubleshooting) information. Advertising brochures and catalog cuts will not be accepted.

(B) Final Documentation:

(1) Configuration Information:

Prior to the start of the project System Acceptance Tests, the Contractor shall provide all final configuration information for Contractor-installed equipment. The Contractor shall submit one electronic copy of their configuration information in the form of a computer spreadsheet compatible with the City of Phoenix computer system. This electronic information shall be saved to a CD-ROM or DVD. The information shall include all configuration parameters for each device location, make and model number, serial number, date of installation, manufacturer, manufacturer contact information, and warrantee expiration date.

(2) Overall Documentation:

All as-built documentation shall be in accordance with Appendix A, subject to the approval of the Engineer prior to acceptance.

(C) Types of Documentation Required:

The final as-built documentation shall be in accordance with Appendix A and consist of the following documents as a minimum (each of the following documents shall be submitted to the Engineer prior to the completion of the project):

(1) Construction As-Built:

The Contractor shall modify the construction plan sheets to reflect any variations in equipment locations or requirements shown on the plan sheets.

The final document submitted by the Contractor to the City shall be a complete set of plan sheets (excluding schematics, details, assignment tables, structural drawings, etc.). Two sets of electronic media in PDF and City of Phoenix standard AutoCAD format shall be furnished.

(2) Foldout Flats:

The Contractor shall provide foldout flats/butterfly drawings in electronic AutoCAD format, using the electronic AutoCAD foldout flat template provided by the City, of each No. 7E, No. 8 and No. 9 pull box utilized in this project. The foldout flat of each No. 7E, No. 8 and No. 9 pull box utilized in this project shall be in plan view and oriented north and shall show conduit and cable locations and sizes, cable coils, splice closures, break-away connector systems, cable sequentials (in/out), and an as-built stamp.

An electronic photo of each No. 7E, No. 8 and No. 9 pull box utilized in this project shall be provided by the Contractor that contains a date stamp, is taken oriented facing north, is geocoded via GPS to the pull box's location, and whose filename contains the nearest adjacent intersection and a description of the type of pull box (i.e., No. 7E, No. 8 and No. 9).

A manual containing a general description and detailed operating and installation instructions shall be provided for each Contractor-furnished electronic component and software. This manual shall also contain instructions for possible modification to the equipment within the capability of the equipment. Four copies shall be provided for each electronic component and software application.

(3) Operator's Manuals:

A manual containing a general description and detailed operating and installation instructions shall be provided for each Contractor-furnished electronic component and software. This manual shall also contain instructions for possible modification to the equipment within the capability of the equipment. Four copies shall be provided for each electronic component and software application.

(4) Maintenance Procedures Manuals:

A manual containing detailed preventive and corrective maintenance procedures shall be provided for each Contractor-furnished electronic component. Step-by-step field and bench trouble-shooting procedures shall be included, as shall normative waveforms and test voltages as applicable. A detailed parts list shall be included. For each part, its circuit or pictorial identification shall be shown, as shall all necessary rating information and a manufacturer and associated model or part number. The list shall also include cross-references to part numbers of other manufacturers who make the same replacement part. Four copies shall be provided for each electronic component.

(D) Formats of Documentation:

Except for standard bound manuals, any standard letter size documentation not submitted in electronic format shall be bound in logical groupings in loose-leaf binders of the 3-ring type. Each such bound grouping of documentation shall be permanently and appropriately labeled. No documentation shall be smaller than standard letter size.

All documentation, including that documentation which exceeds standard letter size, shall be furnished on electronic media in PDF and City of Phoenix standard format (e.g., AutoCAD, Word, Excel). All drawings shall be 11" x 17" (unless otherwise approved by the Engineer in each instance).

The Contractor shall furnish all software manuals, flowcharts, printed tables, charts, and program listings in standard letter size three ring binders if it cannot be submitted in electronic format. All software source code shall be furnished in duplicate on CD or DVD ROM compatible with the City's computer system.

Construction Requirements:

Information shall be shown on these record drawing plan sheets in red ink, depicting the constructed materials and locations of conduit, pull boxes, poles, and cabinets that are found to be different than indicated on the plans, based on the Inventory of Existing Traffic Management System (TMS) related to the project's scope of work and throughout the course of the project. The contractor shall exercise care in handling the record drawing plan sheets and shall return them to the Engineer in like condition. The Engineer will be the sole judge in determining whether the record drawings are acceptable.

Work under this bid item includes transfer of all information noted by the Contractor on the on-site record drawing set described above under this bid item, to final construction record drawings that

will be submitted (including full-size, red-lined original paper submittal and a scanned color copy in PDF format) for approval.

The System Acceptance Tests shall not be complete until the documentation is complete and accepted by the Engineer.

The minimum requirements for construction record drawing acceptance are as follows:

1. All new conduit and existing conduit identified in the existing TMS inventory noting the conduit size and where the conduit run begins and ends.
2. All new conduit and existing pull boxes identified in the existing TMS inventory noting the pull box type, location, and conduit path distance between pull boxes, between pull boxes and poles, and between pull boxes and traffic signal cabinets.
3. On the record drawing plan sheets, provide a unique identifier for each pull box, pole, and cabinet location shown.
4. Using the unique identifier for each pull box, pole, and cabinet location, provide a communications cable summary table with the following information:
 - A unique name for each cable run
 - Any abbreviated name that was used on the cable tags for each cable run.
 - A unique name for the end device each cable is connected to.
 - A unique name for the PoE network switch and its associated port number each cable is connected to.
 - The cable distance of each communications cable, as determined by the standalone testing of ITEM 7320787 SINGLE MODE FIBER OPTIC CABLE (144 FIBERS), based on both cable markings and cable OTDR tester results, for each communications cable installed.

Method of Measurement:

Record drawings will be measured as a single, lump sum unit of work.

Basis of Payment:

The accepted quantities of record drawings, measured as provided above, will be paid for at the contract lump sum price, which price shall be full compensation for the work, including all related work required for an approved set of record drawings.

0000 MA PHX T0239 01C

PHX-0(363)D

Happy Valley Road: 67th Avenue to 35th Avenue

ENVIRONMENTAL COMMITMENTS

The following shall be included in the project special provisions:

- I. **“The project mitigation measures are not subject to change without written approval from ADOT Environmental Planning. The Contractor shall follow all the requirements of the permits specified herein and comply with the project special provisions as well as the MAG Uniform Standard Specifications for Public Works, as well as all applicable local environmental requirements.”**

The following contractor’s mitigation measures, permits and guidelines (as applicable) shall be included in the project special provisions:

II. Project Mitigation Measures:

City of Phoenix Responsibilities:

- Protected native plants within the project limits will be impacted by this project; therefore, the City of Phoenix Project Manager will contact the Office of the City Engineer Environmental Services Section to determine if Arizona Department of Agriculture notification is needed. If notification is needed, the City of Phoenix Project Manager will send the notification at least thirty (30) calendar days prior to the start of construction.
- The attached Migratory Bird Treaty Act, Western burrowing owl, and Sonoran Desert tortoise flyers will be incorporated into the bid documents and provided to the contractor, subcontractors, and all field personnel at the preconstruction meeting or prior to the start of work. The City of Phoenix Project Manager will ensure the contractor posts the Migratory Bird Treaty Act flyer at the construction site at all times during construction.
- The City of Phoenix Street Transportation Department, in coordination with the contractor, will contact the Office of the City Engineer Environmental Services Section to arrange a survey for active bird nests at least 2 weeks prior to the start of any work that will impact vegetation between February 1 and August 31 of any calendar year.
- The City of Phoenix Street Transportation Department will ensure the contractor ceases work within 30 feet of an active bird nest. The Office of the City Engineer Environmental Services Section shall be immediately notified and allowed time to conduct necessary compliance work and make appropriate arrangements.

Contractor Responsibilities:

- Protected native plants within the project limits will be impacted by this project; therefore, the contractor, in coordination with the City of Phoenix Project Manager, shall contact the Office of the City Engineer Environmental Services Section to determine if Arizona Department of Agriculture notification is needed. If notification is needed, the contractor, in coordination with the City of Phoenix Project Manager, shall send the notification at least thirty (30) calendar days prior to the start of construction.
- The contractor shall provide the attached Migratory Bird Treaty Act, Western burrowing owl, and Sonoran desert tortoise flyers to all field personnel prior to the start of work and shall post the flyers at the construction site at all times during construction.
- The contractor, in coordination with the City of Phoenix Street Transportation Department, shall contact the Office of the City Engineer Environmental Services Section to arrange a survey for active bird nests at least 2 weeks prior to the start of any work that will impact vegetation between February 1 and August 31 of any calendar year.
- The contractor shall cease work within 30 feet of an active bird nest. The Office of the City Engineer Environmental Services Section shall be immediately notified and allowed time to conduct necessary compliance work and make appropriate arrangements.
- To prevent the introduction of invasive species seeds, all earthmoving and hauling equipment shall be washed prior to entering the construction site and the contractor shall inspect all construction equipment and remove all attached debris, including plant parts, soil and mud, prior to the equipment entering the construction site.
- To prevent invasive species seeds from leaving the site, the contractor shall inspect all construction and hauling equipment and remove all debris, including plant parts, soil and mud, prior to leaving the construction site.
- For milling activities, the roadway surface preceding the milling machine shall be kept sufficiently wet so as to prevent the generation of any visible fugitive dust particles, but not so wet as to cause excess runoff from the roadway surface onto the roadway shoulder.

III. Permits:
Section 404 Nationwide Permit Number 14 enclosure

IV. Guidelines:

City of Phoenix Street Transportation Department Migratory Bird Treaty Act awareness flyer
City of Phoenix Street Transportation Department Western burrowing owl awareness flyer
City of Phoenix Street Transportation Department Sonoran Desert tortoise awareness flyer



Credit: AGFD



City of Phoenix
STREET TRANSPORTATION DEPARTMENT

Sonoran Desert Tortoise

(Gopherus morafkai)

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 Sonoran Desert tortoise.

Legal Status:

The Sonoran Desert tortoise is a Tier 1A Species of Greatest Conservation Need in the State of Arizona, as defined by the Arizona Game and Fish Department (AGFD) and is a Candidate Species under the Endangered Species Act.

Species Description:

- Length: 8-15 inches
- Bottom shell yellowish and not hinged
- Hind limbs stocky and elephantine
- High-domed, brownish shell with a pattern and prominent growth lines
- Flattened forelimbs for digging, covered with conical scales

Where are they found?

- Rocky, steep slopes and lower mountain slopes
- Native desert scrubland
- Between 904 and 4,198 feet in elevation
- Washes and valley bottoms may be used in dispersal

Where are they active?

- Sonoran Desert tortoise spend the bulk of time in burrows, which provide protection from heat and cold
- Emerge from burrows on rocky slopes, deserts scrub or grassland to feed, bask and breed, mostly during the monsoon season

How to avoid impacting Sonoran Desert tortoise:

- Scan ahead as you work
- ***If Sonoran Desert tortoise observed, STOP WORK, call the contact below and allow the tortoise to leave under its own power***
- Do NOT pick up or handle the Sonoran Desert tortoise unless the tortoise is in imminent danger. Improper handling can result in tortoise death. If a tortoise must be moved, strictly adhere to the following AGFD guidelines (rev. 9/22/2014): <https://s3.amazonaws.com/azgfd-portal-wordpress/PortallImages/files/wildlife/2014%20Tortoise%20handling%20guidelines.pdf>.
- When working in Sonoran Desert tortoise habitat, check for tortoises under parked vehicles before driving

Questions? Concerns? Think your project will impact Sonoran Desert tortoise? Contact the City of Phoenix Street Transportation Department, Environmental Services:

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>



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



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



Cliff Swallow

(Petrochelidon pyrrhonota)

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

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 cliff swallows.

Legal Status:

The cliff swallow 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:

- Orangish buff to chestnut with dark cap
- White underparts
- Length: approx. 5.5 inches
- Short triangular wings and square tail
- Gourd-shaped nest built of mud
- Call: subdued squeaky twittering in flight and near nest

Where are they found?

- Colonies of mud nests on vertical structures:
 - Cliff faces
 - Buildings
 - Box culverts
 - Under bridges
- Colonies may consist of tens, hundreds or even thousands of mud nests at one location

Where/When are they active?

- Cliff swallows can be found in rural or urban settings where a likely structure for building a nest exists; mud nests will be present or under construction
- They arrive in the Sonoran Desert in early March; generally depart by the end of August

How to avoid impacting cliff swallows:

- Scan your work area before you start for mud nests on structures
- ***If mud nests observed and work will physically impact the nests or will occur within 30 feet of the nests; STOP WORK and call one of the contacts below***

Questions? Work will impact cliff swallow nests or will be within 30 feet of cliff swallow nests? 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: National Geographic <http://animals.nationalgeographic.com/animals/birding/cliff-swallow/>

CONSTRUCTION CONTRACTS DBE PROVISIONS

** FOR USE ON LPA FEDERAL AID PROJECTS WITH GOALS. **
* NOTE: REFER TO EDITING INSTRUCTIONS IN SECTIONS 12.0 AND 17.0 *

(LPA EPRISE, 07/01/2017)

DISADVANTAGED BUSINESS ENTERPRISES:

1.0 Policy:

The Arizona Department of Transportation (hereinafter the Department) has established a Disadvantaged Business Enterprise (DBE) program in accordance with the regulations of the U.S. Department of Transportation (USDOT), 49 CFR Part 26. The Department has received Federal financial assistance from the U.S. Department of Transportation and as a condition of receiving this assistance, the Department has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of the Department to ensure that DBEs, as defined in Part 26, have an equal opportunity to receive and participate in USDOT-assisted contracts. It is also the policy of the Department:

1. To ensure nondiscrimination in the award and administration of USDOT-assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for USDOT-assisted contracts;
3. To ensure that the DBE program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are counted as DBEs;
5. To help remove barriers to the participation of DBEs in USDOT-assisted contracts;
6. To assist in the development of firms that can compete successfully in the market place outside the DBE program and;
7. To promote the use of DBEs in all types of federally-assisted contracts and procurement activities.

It is also the policy of the Department to facilitate and encourage participation of Small Business Concerns (SBCs), as defined herein in USDOT-assisted contracts. The Department encourages contractors to take reasonable steps to eliminate obstacles to SBCs' participation and to utilize SBCs in performing contracts.

Local Public Agencies (LPA) and or Subrecipients of Federal financial assistance have adopted ADOT's DBE Program Plan, adhere to the Department's DBE policy and will administer and manage the contracts from advertising, consultant selection, negotiation, contract execution, processing payment reports and contract modifications, audits, DBE compliance (e.g., reporting and monitoring) through contract closeout.

2.0 Assurances of Non-Discrimination:

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 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 or such other remedy as the LPA/Subrecipient, with the Department's concurrence, deems appropriate, which may include, but 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, subrecipient, or subcontractor shall ensure that all subcontract agreements contain this non-discrimination assurance.

3.0 Definitions:

- (A) Commercially Useful Function (CUF):** Commercially Useful Function is defined fully in 49 CFR 26.55 which definition is incorporated herein by reference.
- (B) Committed DBE:** A DBE that was identified by the contractor, typically on a DBE Affidavit, to meet an assigned DBE goal as a condition of contract award and performance, and includes any substitute DBE that has subsequently been committed work to meet the assigned contract goal.
- (C) Disadvantaged Business Enterprise (DBE):** a for-profit small business concern which meets both of the following requirements:
- (1) Is at least 51 percent owned by one or more socially and economically disadvantaged individuals or, in the case of any publicly owned business, at least 51 percent of the stock is owned by one or more such individuals; and,
 - (2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.
- (D) Joint Check:** a two-party check between a subcontractor, DBE and/or non-DBE, a prime contractor and the regular dealer of material supplies.
- (E) Joint Venture:** an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution,

control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

(F) NAICS Code: The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the US business economy.

(G) Non-DBE: any firm that is not a DBE.

(H) Race Conscious: a measure or program is one that is focused specifically on assisting only DBEs, including women-owned DBEs.

(I) Race Neutral: a measure or program is one that is, or can be, used to assist all small businesses. For the purposes of this part, race neutral includes gender-neutrality.

(J) Small Business Concern: a business that meets all of the following conditions:

- (1) Operates as a for-profit business;
- (2) Operates a place of business primarily within the U.S., or makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials, or labor;
- (3) Is independently owned and operated;
- (4) Is not dominant in its field on a national basis; and
- (5) Does not have annual gross receipts that exceed the Small Business Administration size standards average annual income criteria for its primary North American Industry Classification System (NAICS) code.

(K) Socially and Economically Disadvantaged Individuals: any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is:

- (1) Any individual who is found to be a socially and economically disadvantaged individual on a case-by-case basis.
- (2) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - (i) "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;
 - (ii) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;

- (iii) "Native Americans," which includes persons who are enrolled members of a federally or State recognized Indian tribe, Alaskan Natives or Native Hawaiians;
- (iv) "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Republic of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong;
- (v) "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
- (vi) Women;
- (vii) Any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration (SBA), at such time as the SBA designation becomes effective.

4.0 Working with DBEs:

The Department works with DBEs and assists them in their efforts to participate in the highway construction program. All bidders should contact the Department's Business Engagement and Compliance Office (BECO) by phone, through email, or at the address shown below, for assistance in their efforts to use DBEs in the highway construction program of the Department. BECO contact information is as follows:

Arizona Department of Transportation
Business Engagement and Compliance Office
1801 W. Jefferson Street, Room 101, Mail Drop 154A
Phoenix, AZ 85007
Phone (602) 712-7761
FAX (602) 712-8429
Email: contractorcompliance@azdot.gov
Website: www.azdot.gov/bec

4.01 Mentor-Protégé Program:

ADOT has established a Mentor-Protégé program as an initiative to encourage and develop disadvantaged businesses in the highway construction industry. The program encourages prime contractors to provide certain types of assistance to certified DBE subcontractors. ADOT encourages contractors and certified DBE subcontractors to engage in a Mentor-Protégé agreement under certain conditions. Such an agreement must be mutually beneficial to both

parties and to ADOT in fulfilling the requirements of 49 CFR Part 23. For guidance regarding this program, refer to the Mentor-Protégé Program Guidelines available on the BECO website.

The Mentor-Protégé program is intended to increase legitimate DBE activities. But the program does not diminish the DBE rules or regulations, and participants may not circumvent these rules.

5.0 Applicability:

ADOT has established an overall annual goal for DBE participation on Federal-aid contracts. ADOT intends for the goal to be met with a combination of race conscious and race neutral efforts. Race conscious participation occurs where the contractor uses a percentage of DBEs, as defined herein, to meet the contract-specified goal. Race neutral efforts are those that are, or can be, used to assist all small businesses or increase opportunities for all small businesses. The regulation, 49 CFR 26, describes race neutral participation as when a DBE wins a prime contract through customary competitive procurement procedures or is awarded a subcontract on a prime contract that does not carry a DBE contract goal.

The contractor shall meet the goal specified herein with DBEs, or establish that it was unable to meet the goal despite making good faith efforts to do so. Prime contractors are encouraged to obtain DBE participation above and beyond any goals that may be set for this project.

The DBE provisions are applicable to all bidders including DBE bidders.

6.0 Certification and Registration:

6.01 DBE Certification:

Certification as a DBE shall be predicated on:

- (1) The completion and execution of an application for certification as a "Disadvantaged Business Enterprise".
- (2) The submission of documents pertaining to the firm(s) as stated in the application(s), including but not limited to a statement of social disadvantage and a personal financial statement.
- (3) The submission of any additional information which the Department may require to determine the firm's eligibility to participate in the DBE program.
- (4) The information obtained during the on-site visits to the offices of the firm and to active job-sites.

Applications for certification may be filed online with the Department or one of its Unified Certification Program (UCP) partner agencies at any time through the Arizona Unified Transportation Registration and Certification System (AZ UTRACS) website at <http://www.azutracs.com>.

DBE firms and firms seeking DBE certification shall cooperate fully with requests for information relevant to the certification process. Failure or refusal to provide such information is a ground for denial or removal of certification.

ADOT is a member of the AZ Unified Certification Program (AZUCP). Only DBE firms that are certified by the AZUCP are eligible for credit on ADOT projects. A list of DBE firms certified by AZUCP is available on the internet at <http://www.azutracs.com/>. The list will indicate contact information and specialty for each DBE firm, and may be sorted in a variety of ways. However, ADOT does not guarantee the accuracy and/or completeness of this information, nor does ADOT represent that any licenses or registrations are appropriate for the work to be done.

The Department's certification of a DBE is not a representation of qualifications and/or abilities; only that the firm has met the criteria for DBE certification as outlined in 49 CFR Part 26. The contractor bears all risks of ensuring that DBE firms selected by the contractor are able to perform the work.

6.02 SBC Registration:

To comply with 49 CFR Part 26.39, ADOT's DBE Program incorporates contracting requirements to facilitate participation by Small Business Concerns (SBCs) in federally assisted contracts. SBCs are for-profit businesses authorized to do business in Arizona that meet the Small Business Administration (SBA) size standards for average annual revenue criteria for its primary North American Industry Classification System (NAICS) code.

While the SBC component of the DBE program does not require utilization goals on projects, the Department and the LPA/Subrecipient encourages contractors to utilize small businesses that are registered in AZ UTRACS on their contracts, in addition to DBEs meeting the certification requirement. The contractor may use the AZ UTRACS website to search for certified DBEs and registered SBCs that can be used on the contract. However, SBCs that are not DBEs will not be counted toward the DBE contract goal.

SBCs can register online at the AZ UTRACS website. The registration of SBCs is not a representation of qualifications and/or abilities. The contractor bears all risks of ensuring that SBC firms selected by the contractor are able to perform the work.

7.0 DBE Financial Institutions:

ADOT thoroughly investigates the full extent of services offered by financial institutions owned and controlled by socially and economically disadvantaged individuals in its service area and makes reasonable efforts to use these institutions. ADOT encourages prime contractors to use such institutions on USDOT assisted contracts. However, use of DBE financial institutions will not be counted toward the DBE contract goal.

ADOT and the LPA/Subrecipient encourages prime contractors to research the Federal Reserve Board website at www.federalreserve.gov to identify minority-owned banks in Arizona derived

from the Consolidated Reports of Condition and Income filed quarterly by banks (FFIEC 031 and 041) and from other information on the Board's National Information Center database.

8.0 Time is of the Essence:

TIME IS OF THE ESSENCE IN RESPECT TO THE DBE PROVISIONS.

9.0 Computation of Time:

In computing any period of time described in this DBE special provision, such as calendar days, the day from which the period begins to run is not counted, and when the last day of the period is a Saturday, Sunday, or Federal or State holiday, the period extends to the next day that is not a Saturday, Sunday, or Federal or State holiday. In circumstances where the LPA/Subrecipient Procurement Office is closed for all or part of the last day, the period extends to the next day on which the LPA/Subrecipient Procurement Office is open.

10.0 Contractor and Subcontractor Requirements:

10.01 General:

The contractor shall establish a DBE program that will ensure nondiscrimination in the award and administration of contracts and subcontracts.

Agreements between the bidder and a DBE in which the DBE promises not to provide subcontracting quotations to other bidders are prohibited.

10.02 DBE Liaison:

The contractor shall designate a DBE Liaison responsible for the administration of the contractor's DBE program. The name of the designated DBE Liaison shall be included in the DBE Intended Participation Affidavit Summary.

11.0 Bidders/Proposers List and AZ UTRACS Registration Requirement:

Under Title 49 CFR of the Code of Federal Regulations, Part 26.11, DOTs are required to collect certain information from all contractors and subcontractors who seek to work on federally-assisted contracts in order to set overall and contract DBE goals. ADOT collects this information through a Bidders/Proposers List when firms register their companies on the Arizona Unified Transportation Registration and Certification System (AZ UTRACS) web portal at <http://www.azutracs.com/> a centralized database for companies that seek to do business with ADOT and the LPA/Subrecipient. This information will be maintained as confidential to the extent allowed by federal and state law.

Prime contractors and all subcontractors, including DBEs, must be registered in AZ UTRACS. Bidders may verify that their firm and each subcontractors is registered using the AZ UTRACS website.

Bidders may obtain additional information at the AZ UTRACS website or by contacting the LPA/Subrecipient.

Bidders shall create the Bidders/Proposers List in the AZ UTRACS by selecting all subcontractors, service providers, manufacturers and suppliers that expressed interest or submitted bids, proposals or quotes for this contract. The Bidders/Proposers List form must be complete and must include the names for all subcontractors, service providers, manufacturers and suppliers regardless of the bidders' intentions to use those firms on the project.

All bidders must complete the Bidders/Proposers List online at AZ UTRACS whether they are the apparent low bidder or not. A confirmation email will be generated by the system. The bidders shall submit to the LPA/Subrecipient a copy of the email confirmation no later than 4:00 p.m. on the fifth calendar day following the bid opening. Faxed copies are acceptable.

FAILURE TO SUBMIT THE REQUIRED BIDDERS/PROPOSERS LIST TO THE LPA/SUBRECIPIENT PROCUREMENT OFFICE BY THE STATED TIME AND IN THE MANNER HEREIN SPECIFIED SHALL BE CAUSE FOR THE BIDDER BEING DEEMED INELIGIBLE FOR AWARD OF THE CONTRACT.

12.0 DBE Goals:

The minimum goal for participation by DBEs on this project is as follows:

12.60 Percent

The percentage of DBE participation shall be based on the total construction bid.

13.0 Submission with Bids:

All bidders are required to certify in their bid proposal on the "Disadvantaged Business Enterprise Goal Assurance" certificate either:

- (1) The bidder has met the established DBE goal and arrangements with certified DBEs have been made prior to the submission of the bid, or
- (2) The bidder has been unable to meet the established DBE goal prior to the submission of the bid and has made good faith efforts to do so.

For the purpose of this section, 'arrangements' means, at a minimum, agreement between the bidder and the certified DBE, either written or oral, on unit prices and scope of work.

This certificate may not be revised or corrected after submission of the bid. If the bidder certifies that it has met the goal, the bidder cannot change its position after submission of the bid and submit documentation of a good faith effort. If the bidder certifies that it has been unable to meet the goal and has made a good faith effort, the bidder cannot change its

position after submission of the bid and claim to have met or be able to meet the established goal.

Bids submitted with altered, incomplete or unsigned certificates will be considered non-responsive. Bids submitted with certifications on forms other than those furnished by the LPA/Subrecipient Procurement Office will be considered non-responsive.

Certifications on forms other than those furnished by the LPA/Subrecipient will be considered non-responsive.

14.0 Bidder Meeting DBE Goal:

14.01 General:

To be considered responsible and eligible for award of a contract, a bidder who has indicated in its bid that it met the DBE goal must submit the information described in this Subsection no later than five calendar days after bid opening.

If the bid of the apparent low bidder is rejected for any reason, the next low bidder may become the apparent low bidder only if it had submitted the information described in this Subsection or Subsection 15.01, as appropriate, no later than five calendar days after bid opening.

In order to be awarded this contract, a bidder must establish either (1) that it has met the DBE participation goal of the contract or (2) that it has made adequate good faith efforts (GFE) to meet the DBE goal. This requirement is in addition to all other pre-award requirements.

If the apparent low bidder indicates in the bid that it has met the DBE goal, the bidder shall submit a DBE Intended Participation Affidavit for each individual DBE, and the Intended Participation Affidavit Summary as follows:

- (1) The DBE Intended Participation Affidavit for each individual DBE and the Intended Participation Affidavit Summary must be received by LPA/Subrecipient Procurement Office no later than 4:00 P.M. on the fifth calendar day following the bid opening. Copies of these forms are available from LPA/Subrecipient. The affidavits and Summary shall indicate that the bidder has met DBE goal if this was indicated on the submittal with the bid.
- (2) The Intended Participation Affidavit Summary and the DBE Intended Participation Affidavit for each individual DBE must be accurate and complete in every detail and must be signed by an officer of the contractor(s). Percentages and dollar amounts must be accurate. Percentages shall be listed to two decimal places. The DBE Intended Participation Affidavit Summary must be submitted listing all the DBEs intended to be used and the creditable amounts.

- (3) A separate DBE Intended Participation Affidavit must be submitted for each DBE used to meet the goal of the project. The bidder shall indicate each DBE's name,—a description of the work the DBE will perform, bid item number, proposed subcontract amount, and the NAICS code applicable to the kind of work the firm would perform on the contract. A list of certified DBEs with their respective NAICS codes can be located on the DBE Directory at AZ UTRACS website. All partial items must be explained. If not, the DBE will be considered to be responsible for the entire item. The intended DBE must complete and sign the form to confirm its participation in the contract.
- (4) The affidavits and summary may be submitted electronically through email to the LPA/Subrecipient Procurement Office.
- (5) A bidder must determine DBE credit in accordance with DBE Subsection 18 (Crediting DBE Participation Toward Meeting Goals). The affidavit will be reviewed, and approved or rejected by the LPA/Subrecipient Procurement Office, with BECO concurrence.
- (6) Only those DBE firms certified by the Arizona Unified Certification Program (AZUCP) as of the deadline for bid submittal will be considered for DBE credit. It shall be the bidder's responsibility to ascertain the certification status of designated DBEs.
- (7) All DBE commitment amounts must be finalized between the DBE subcontractor and the bidder prior to the deadline for affidavit submittal. Bidders shall not inflate DBE awards in order to meet contract goals.
- (8) The bidder bears the risk of late submission or late delivery by the postal service or a delivery service. Affidavits and Summary received by the LPA/Subrecipient Procurement Office after 4:00 P.M. on the fifth calendar day following the bid opening will not be accepted.
- (9) Reduction of DBE commitments after affidavit submittal and prior to execution of the contract without good cause will result in the bid being rejected or LPA/Subrecipient rescinding any award. Scheduling conflicts are not necessarily evidence of good cause as this should have been considered during pre-bid negotiations. The contractor is responsible for ensuring the DBE is available to meet the requirements of the contract.

14.02 Failure to Comply:

If the apparent low bidder fails to submit the required information by the stated time and in the manner herein specified, or if the submitted information reveals a failure to meet the requirements of the specifications, the apparent low bidder shall be ineligible to receive award of the contract and the bid will be rejected.

15.0 Documented Good Faith Effort:

15.01 General:

To be considered responsible and eligible for award of a contract a bidder, who has indicated in its bid that it was unable to meet the DBE goal but made good faith efforts must submit the information described in this Subsection no later than five calendar days after bid opening.

If the bid of the apparent low bidder is rejected for any reason, the next low bidder may become the apparent low bidder only if it had submitted the information described in this Subsection or Subsection 14.01, as appropriate, no later than five calendar days after bid opening.

Failure to demonstrate good faith efforts to the satisfaction of the LPA/Subrecipient with concurrence of BECO will result in the rejection of the bid. In the event that the low bid is rejected, the Department will consider award of the contract to the next responsible and responsive bidder. To be considered responsive, the bidder must have submitted the information described in either Subsection 14 or 15 of this DBE special provision, no later than five calendar days after bid opening.

The bidder's good faith effort documentation must be submitted to and received by the LPA/Subrecipient Procurement Office by 4:00 P.M. on the fifth calendar day after the bids are opened. Good faith effort documentation may be submitted electronically through email to the LPA/Subrecipient Procurement Office. Good faith effort documentation submitted after the time specified will not be accepted.

The bidder bears the risk of late submission or late delivery by the postal service or a delivery service.

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. A generalized assertion that the contractor received multiple quotes is not sufficient unless copies of those quotes are provided.

Bidders are encouraged to review Appendix A of 49 CFR Part 26.

Useful information related to encouraging DBE participation and documented good faith efforts can be found in the "Good Faith Effort Guide" and other documents made available on the internet at BECO's website. The information provided in the "Good Faith Effort Guide" does not replace the specifications; bidders must comply with the requirements of this specification.

In order to be awarded a contract on the basis of good faith efforts, a bidder must show that it took all necessary and reasonable steps to achieve the DBE goal which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful. The quality, quantity, and intensity of the different kinds of efforts the bidder made will be evaluated. The efforts employed by the bidder should be those that one could reasonably expect a bidder to make if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE goal. Mere pro forma efforts are not sufficient good faith efforts to meet the DBE contract requirements.

The bidder shall, as a minimum, seek DBEs in the same geographic area in which it generally seeks subcontractors for a given project. If the bidder cannot meet the goals using DBEs from this geographic area, the bidder, as part of its effort to meet the goals, shall expand its search to a reasonably wider geographic area.

The following is a list of types of efforts a bidder must address when submitting good faith effort documentation:

- (1) Contacting the LPA/Subrecipient and BECO prior to the submission of bids, either by e-mail, or by telephone, to inform of the firm's difficulty in meeting the DBE goals on a given project, and requesting assistance. The bidder must document its contact with LPA/Subrecipient and BECO, and indicate the type of contact, the date and time of the contact, the name of the person(s) contacted, and any details related to the communication. The contact must be made in sufficient time before bid submission to allow the LPA/Subrecipient and BECO to provide effective assistance. The bidder will not be considered to have made good faith efforts if the bidder failed to contact LPA/Subrecipient and BECO.
- (2) Conducting market research to identify small business contractors and suppliers, and soliciting, through all reasonable and available means the interest of all certified DBEs who have the capability to perform the work of the contract. This may include attendance at pre-bid meetings and business matchmaking meetings and events, advertising and/or providing written notices, posting of "Notices of Sources Sought" and/or "Requests for Proposals" at reasonable locations, including the contractor's website, written notices or emails to all DBEs listed in the Department's directory of transportation firms that specialize in areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project. The bidder should solicit this interest as early in the acquisition process as practicable to allow DBEs to respond to the solicitation and submit a timely offer for the subcontract. The bidder should determine with certainty if the DBEs are interested by taking appropriate steps to follow-up initial solicitations.
- (3) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units (for example smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible time frames for performance and delivery schedules in a manner that encourages and facilitates DBE participation.
- (4) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist DBEs in responding to solicitations.

- (5) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to the DBE subcontractors and suppliers, and to select those portions of work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided from the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform work.

Mailings to DBEs requesting bids are not alone sufficient to constitute good faith effort.

A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. However, prime contractors are not required to accept higher quotes from DBEs if the price difference is excessive or unreasonable. Documentation, such as copies of all other bids or quotes, must be submitted.

- (6) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations or associations and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal.
- (7) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- (8) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (9) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. The contractor must submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract. A generalized assertion that the contractor has received multiple quotes is not sufficient unless copies of those quotes are provided. The Department may contact rejected DBEs as part of its investigation.

However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.

In determining whether a bidder has made good faith efforts, the LPA/Subrecipient will review the documented efforts of the contractor and will review the performance of other bidders in meeting the contract goal.

A promise to use DBEs after contract award is not considered to be responsive to the contract solicitation or to constitute good faith efforts.

The LPA/Subrecipient will evaluate the submittal and make a determination, with BECO concurrence, on whether in fact good faith efforts have been demonstrated consistent with the specifications and the Federal regulations, 49 CFR 26, Appendix A.

15.02 Failure to Comply:

If the apparent low bidder fails to submit the required information by the stated time and in the manner herein specified, or if the submitted information reveals a failure to meet the requirements of the specifications, the apparent low bidder shall be ineligible to receive award of the contract and the bid will be rejected.

15.03 Appeal and Protest of Good Faith Effort Determination:

Any interested party may appeal the determination of LPA/Subrecipient to the State Engineer. That appeal must be in writing and personally delivered or sent by certified mail, return receipt requested, to the State Engineer. The protest must be received by the State Engineer no later than seven calendar days after the decision of the LPA/Subrecipient. Copies of the protest shall be sent by the protestant to the LPA/Subrecipient and every bidder, at the same time the protest is submitted to the State Engineer. Any bidder whose bid is rejected for failure to meet the goal or make GFE will be given the opportunity to meet in person with the State Engineer, at the bidder's written request included in the protest, to discuss the issue of whether it met the goal or made adequate good faith efforts to do so.

Any interested party may submit a response to the appeal no later than seven calendar days after the appeal. Responses from interested parties must also be in writing and personally delivered or sent by certified mail, return receipt requested, to the State Engineer. Any interested party submitting such response shall also provide a copy of its response to the LPA/Subrecipient and every bidder, at the same time the protest is submitted to the State Engineer. The State Engineer shall promptly consider any appeals under this subsection and shall notify the LPA/Subrecipient and all bidders in writing of the State Engineer's findings and decision.

In accordance with 49 CFR 26.53(d)(5), the result of the State Engineer's decision is not subject to administrative appeal to the USDOT.

16.0 Rejection of Low Bid:

If, for any reason, the bid of the apparent low bidder is rejected, a new apparent low bidder will be identified. The LPA/Subrecipient Procurement Office will notify the new apparent low bidder.

A bidder may become the apparent low bidder only if it had submitted the information described in Subsection 14.01 or 15.01, as appropriate, no later than five calendar days after bid opening.

17.0 Payment Reporting:

The contractor shall report on a monthly basis indicating the amounts paid to all subcontractors, of all tiers, working on the project. Reporting shall be in accordance with Prompt Pay and Payment Reporting requirements section _____ of the contract specifications.

18.0 Crediting DBE Participation Toward Meeting Goals:

18.01 General Requirements:

To count toward meeting a goal, the DBE firm must be certified as of the deadline for submission of bids in each NAICS code applicable to the kind of work the firm will perform on the contract. NAICS for each DBE can be found on the AZ UTRACS under the Firm Directory. General descriptions of all NAICS codes can be found at www.naics.com.

Credit towards the contractor's DBE goal is given only after the DBE has been paid for the work performed.

The entire amount of a contract that is performed by the DBE's own forces, including the cost of supplies and materials purchased by the DBE for the work on the contract and equipment leased by the DBE will be credited toward DBE participation. Supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate will not be credited toward DBE participation. Work included in a force account item cannot be listed on the DBE Intended Participation Affidavit.

The contractor bears the responsibility to determine whether the DBE possesses the proper contractor's license(s) to perform the work and, if DBE credit is requested, that the DBE subcontractor is certified for the requested type of work.

If a DBE cannot complete its work due to failure to obtain or maintain its licensing, the contractor bears the responsibility to notify the LPA/Subrecipient immediately after the contractor becomes aware of the situation, and request approval to replace the DBE with another DBE. The

contractor shall follow the DBE termination/substitution requirements described in Subsection 24.0 of these DBE provisions.

The Department's certification is not a representation of a DBE's qualifications and/or abilities. The contractor bears all risks that the DBE may not be able to perform its work for any reason.

A DBE may participate as a prime contractor, subcontractor, joint venture partner with either a prime contractor or a subcontractor, or as a vendor of materials or supplies. A DBE joint venture partner shall be responsible for a clearly defined portion of the work to be performed, in addition to meeting the requirements for ownership and control.

The dollar amount of work to be accomplished by DBEs, including partial amount of a lump sum or other similar item, shall be on the basis of subcontract, purchase order, hourly rate, rate per ton, etc., as agreed to between parties.

With the exception of bond premiums, all work must be attributed to specific bid items. Where work applies to several items, the DBE contracting arrangement must specify unit price and amount attributable to each bid item. DBE credit for any individual item of work performed by the DBE shall be the lesser of the amount to be paid to the DBE or the prime contractor's bid price. If the amount bid by the DBE on any item exceeds the prime contractor's bid amount, the prime contractor may not obtain credit by attributing the excess to other items.

Where more than one DBE is engaged to perform parts of an item (for example, supply and installation), the total amount payable to the DBEs will not be considered in excess of the prime contractor's bid amount for that item.

Bond premiums may be stated separately, so long as the arrangement between the prime contractor and the DBE provides for separate payment not to exceed the price charged by the bonding company.

DBE credit may be obtained only for specific work done for the project, supply of equipment specifically for physical work on the project, or supply of materials to be incorporated in the work. DBE credit will not be allowed for costs such as overhead items, capital expenditures (for example, purchase of equipment), and office items.

If a DBE performs part of an item (for example, installation of materials purchased by a Non-DBE), the DBE credit shall not exceed the lesser of (1) the DBE's contract or (2) the prime contractor's bid for the item, less a reasonable deduction for the portion performed by the Non-DBE.

When a DBE performs as a partner in a joint venture, only that portion of the total dollar value of the contract which is clearly and distinctly performed by the DBE's own forces can be credited toward the DBE goal.

The contractor may credit second-tier subcontracts issued to DBEs by non-DBE subcontractors. Any second-tier subcontract to a DBE used to meet the goal must meet the requirements of a first-tier DBE subcontract.

A prime contractor may credit the entire amount of that portion of a construction contract that is performed by the DBE's own forces. The cost of supplies and materials obtained by the DBE for the work of the contract can be included so long as that cost is reasonable. Leased equipment may also be included. No credit is permitted for supplies purchased or equipment leased from the prime contractor or its affiliate(s).

When a DBE subcontracts a part of the work of its contract to another firm, the value of the subcontract may be credited towards the DBE goal only if the DBE's subcontractor is itself a DBE and performs the work with its own forces. Work that a DBE subcontracts to a non-DBE firm does not count toward a DBE goal.

A prime contractor may credit the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a USDOT-assisted contract, provided the fees are reasonable and not excessive as compared with fees customarily allowed for similar services.

18.02 DBE Prime Contractor:

When a certified DBE firm bids on a contract that contains a DBE goal, the DBE firm is responsible for meeting the DBE goal on the contract or making good faith efforts to meet the goal, just like any other bidder. In most cases, a DBE bidder on a contract will meet the DBE goal by virtue of the work it performs on the contract with its own forces. However, all the work that is performed by the DBE bidder or any other DBE subcontractors and DBE suppliers will count toward the DBE goal. The DBE bidder shall list itself along with any DBE subcontractors and suppliers, on the DBE Intended Participation Affidavit and Summary in order to receive credit toward the DBE goal.

18.03 Effect of Loss of DBE Eligibility:

If a DBE is deemed ineligible (decertified) or suspended in accordance with 49 CFR 26.87 and 26.88, the DBE may not be considered to meet a contract goal on a new contract, but may be considered to meet the contract goal under a subcontract that was executed before the DBE suspension or decertification is effective.

When a committed DBE firm or a DBE prime contractor loses its DBE eligibility and a subcontract or contract has not been executed before a decertification notice is issued to the DBE firm by its certifying agency, the ineligible firm does not count toward the contract goal. The contractor must meet the contract goal with an eligible DBE firm or firms or demonstrate good faith effort. When a subcontract is executed with the DBE firm before the Department notified the firm of its ineligibility, the contractor may continue to use the firm on the contract and may continue to receive credit toward the DBE goal for the firm's work.

18.04 Notifying the Contractor of DBE Certification Status:

Each DBE contract of any tier shall require any DBE subcontractor or supplier that is either decertified or certified during the term of the contract to immediately notify the contractor and all parties to the DBE contract in writing, with the date of decertification or certification. The contractor shall require that this provision be incorporated in any contract of any tier in which a DBE is a participant.

18.05 Police Officers:

DBE credit will not be permitted for procuring DPS officers. For projects on which officers from other agencies are supplied, DBE credit will be given only for the broker fees charged, and will not include amounts paid to the officers. The broker fees must be reasonable.

18.06 Commercially Useful Function:

A prime contractor can credit expenditures to a DBE subcontractor toward DBE goals only if the DBE performs a Commercially Useful Function (CUF).

A DBE performs a CUF when it is responsible for execution of the work of a contract and carries out its responsibilities by actually 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 on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself that it uses on the project. To determine whether a DBE is performing a commercially useful function, the LPA/Subrecipient will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

A DBE will not be considered to perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, the LPA/Subrecipient will examine similar transactions, particularly those in which DBEs do not participate.

If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or 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 LPA/Subrecipient will presume that the DBE is not performing a commercially useful function.

When a DBE is presumed not to be performing a commercially useful function as provided above, the DBE may present evidence to rebut this presumption. The LPA/Subrecipient will

determine if the firm is performing a CUF given the type of work involved and normal industry practices.

The LPA/Subrecipient will notify the contractor, in writing, if it determines that the contractor's DBE subcontractor is not performing a CUF. The contractor will be notified within seven calendar days of the LPA/Subrecipient's decision.

Decisions on CUF may be appealed to the ADOT BECO. The appeal must be in writing and personally delivered or sent by certified mail, return receipt requested, to the ADOT BECO. The appeal must be received by the ADOT BECO no later than seven calendar days after the decision of LPA/Subrecipient. LPA/Subrecipient decision remains in effect unless and until ADOT BECO reverses or modifies LPA/Subrecipient decision. ADOT BECO will promptly consider any appeals under this subsection and notify the contractor of the ADOT BECO findings and decisions. Decisions on CUF matters are not administratively appealable to USDOT.

The LPA/Subrecipient will conduct project site visits on the contract to confirm that DBEs are performing a CUF. The contractor shall cooperate during the site visits and the LPA/Subrecipient staff will make every effort not to disrupt work on the project.

18.07 Trucking:

LPA/Subrecipient will use the following factors in determining whether a DBE trucking company is performing a commercially useful function. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract on every day that credit is to be given for trucking.

The contractor will receive credit for the total value of transportation services provided by the DBE using trucks it owns, insures and operates, and 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 DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks with drivers from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE leased trucks with drivers not to exceed the value of transportation services on the contract provided by DBE-owned trucks or leased trucks with DBE employee drivers. Additional participation by non-DBE owned trucks with drivers receives credit only for the fee or commission paid to the DBE as a result of the lease agreement.

Example: DBE Firm X uses two of its own trucks on a contract. It leases two trucks from DBE Firm Y and six trucks from non-DBE firm Z. DBE credit would be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four of the six trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight trucks. DBE credit could be awarded only for the fees or commissions pertaining to the remaining trucks Firm X receives as a result of the lease with Firm Z.

The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.

Example: DBE Firm X uses two of its own trucks on a contract. It leases three additional trucks from non-DBE Firm Z. Firm X uses its own employees to drive the trucks leased from Firm Z. DBE credit would be awarded for the total value of the transportation services provided by all five trucks.

For purposes of this section, a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE. Credit will be allowed only for those lease costs related to the time each truck is devoted to the project.

DBE credit for supplying paving grade asphalt and other asphalt products will only be permitted for standard industry hauling costs, and only if the DBE is owner or lessee of the equipment and trucks. Leases for trucks must be long term (extending for a fixed time period and not related to time for contract performance) and must include all attendant responsibilities such as insurance, titling, hazardous waste requirements, and payment of drivers.

18.08 Materials and Supplies:

LPA/Subrecipient will credit expenditures with DBEs for material and supplies towards the DBE goal as follows. If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies is credited. A manufacturer is defined as a firm that 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.

If the materials or supplies are purchased from a DBE regular dealer, 60 percent of the cost of the materials or supplies is credited. A DBE regular dealer is defined as a firm that owns, operates, or maintains a store or 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 stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the firm must be an established,

regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A firm may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, stone or asphalt without owning, operating, or maintaining a place of business, as provided above, if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement, and not on an ad-hoc or contract-by-contract basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph and the paragraph above.

With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, the LPA/Subrecipient will credit the entire amount of the fees or commissions charged by the DBE for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services. The cost of the materials and supplies themselves may not be counted toward the DBE goal.

The LPA/Subrecipient will credit expenditures with DBEs for material and supplies (e.g. whether a firm is acting as a regular dealer or a transaction expeditor) towards the DBE goal on a contract-by-contract basis. The fact that a DBE firm qualifies under a classification (manufacturer, regular dealer or supplier) for one contract does not mean it will qualify for the same classification on another contract. The bidder shall be responsible for verifying whether a DBE qualifies as a DBE manufacturer, regular dealer or supplier. The bidder may contact the LPA/Subrecipient for assistance in this determination.

19.0 Effect of Contract Changes:

If for any reason it becomes apparent that the DBE goal will not be met then the contractor shall: (1) immediately notify the LPA/Subrecipient of the potential or actual decrease in DBE compensation, and (2) make good faith efforts to obtain DBE participation to meet or exceed the DBE contract goal. Good faith efforts required under the provisions of this section may vary, depending on the time available, the nature of the change, who initiated the change, and other factors as determined by LPA/Subrecipient.

LPA/Subrecipient will approve or deny the contractor's good faith efforts with BECO concurrence.

The contractor is not required to take work committed to another subcontractor and assign it to a DBE subcontractor in order to meet the committed DBE percentage.

If the resulting change increases the scope or quantity of work being done by a DBE subcontractor, the DBE shall be given the opportunity to complete the additional work and receive additional compensation beyond their original subcontract amount.

20.0 DBE Participation Above the Goal (Race Neutral Participation):

Additional DBE participation above the DBE participation required to meet the contract DBE goal is an important aspect of the Department's DBE program. The contractor is strongly encouraged to use additional DBEs above the DBE goal requirement in the contract to assist the Department in meeting its overall DBE goal and help the Department to meet the maximum feasible portion of its DBE goals through race neutral participation as outlined in 49 CFR Part 26.

There are fewer administrative requirements on the part of the contractor when using race neutral DBEs (DBEs not listed on the DBE Intended Participation Affidavit Summary). For example, if a DBE is not listed on the DBE Intended Participation Affidavit Summary, the DBE does not have to submit an Affidavit, and the subcontract approval process follows the same process of any other subcontract. The contractor does not have to replace the race neutral DBE with another DBE subcontractor if the race neutral DBE fails to perform. Therefore these DBEs are treated as any other subcontractor on the project.

21.0 Required Provisions for DBE Subcontracts:

All subcontracts of any tier, all supply contracts, and any other contracts in which a DBE is a party shall include, as a physical attachment, DBE Subcontract Compliance Assurances available from the LPA/Subrecipient.

Contractors executing agreements with subcontractors, DBE or non-DBE, that materially modify federal regulation and state statutes such as, prompt payment and retention requirements, through subcontract terms and conditions will be found in breach of contract which may result in termination of the contract, or any other such remedy as the LPA/Subrecipient and ADOT deem appropriate as outlined in DBE Subsection 2.0.

LPA/Subrecipient reserves the right to conduct random reviews of DBE and non-DBE subcontract documentation to ensure compliance with federal requirements.

The contractor shall ensure that all subcontracts or agreements with DBEs to supply labor or materials require that the subcontract and all lower tier subcontracts be performed in accordance with 49 CFR Part 26.

The Contractor shall provide electronic copies of signed subcontract agreements for all DBE Subcontracts listed on the DBE Intended Participation Affidavit Summary by uploading them within 15 calendar days of an approved contract to the LPA DBE System.

22.0 Contract Performance:

Contract items of work designated by the contractor to be awarded to DBEs shall be performed by the designated DBE or a LPA/Subrecipient, with BECO concurrence, approved DBE substitute. DBE contract work items shall not be performed by the contractor, or a non-DBE subcontractor without prior approval by the LPA/Subrecipient, with BECO concurrence. The DBE must perform a commercially useful function; that is, the DBE must manage, perform, and supervise a distinct element of work.

The contractor is required to use DBEs identified to meet the contract goal, so the prime contractor is responsible for ensuring that the DBEs are available to meet scheduling, work and other requirements on the contract.

LPA/Subrecipient will conduct reviews to ensure compliance with DBE requirements. The reviews may include, among other activities, interview of DBEs and their employees and the contractor and its employees. The contractor shall cooperate in the review and make its employees available. The contractor shall inform the LPA/Subrecipient in advance when each DBE will be working on the project to help facilitate reviews.

LPA/Subrecipient reserves the right to inspect all records of the contractor and all records of the DBEs and non-DBE subcontractors concerning this contract. The contractor must make all documents related to all contracts available to the LPA/Subrecipient upon request.

The contractor shall provide to the LPA/Subrecipient, at the pre-construction conference, copies of all completed, approved, and signed subcontracts, purchase orders, invoices, etc., with all committed DBEs. These documents shall include the AZ UTRACS Registration number for the subcontractor or materials supplier.

Use of every DBE listed on the DBE Intended Participation Affidavit Summary is a condition of this contract. The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed on the Intended Participation Affidavit Summary unless the contractor obtains written consent from the LPA/Subrecipient with BECO concurrence. The contractor shall not be entitled to any payment for work or material that is not performed or supplied by the listed DBE, unless the contractor obtains written consent from the LPA/Subrecipient with BECO concurrence.

23.0 Joint Checks:

23.01 Requirements:

A DBE subcontractor and a material supplier (or equipment supplier) may request permission for the use of joint checks for payments from the prime contractor to the DBE subcontractor and the supplier. Joint checks may be issued only if all the conditions in this subsection are met.

1. The DBE subcontractor must be independent from the prime contractor and the supplier, and must perform a commercially useful function. The DBE subcontractor must be responsible for negotiating the price of the material, determining quality and quantity, ordering the materials, installing (where applicable), and paying for the material. The DBE subcontractor may not be utilized as an extra participant in a transaction, contract, or project in order to obtain the appearance of DBE participation.
2. The use of joint checks will be allowed only if the prime contractor, DBE subcontractor, and material supplier establish that the use of joint checks in similar transactions is a

commonly recognized business practice in the industry, particularly with respect to similar transactions in which DBE's do not participate.

3. A material or supply contract may not bear an excessive ratio relative to the DBE subcontractor's normal capacity.
4. There may not be any exclusive arrangement between one prime and one DBE in the use of joint checks that may bring into question whether the DBE is independent of the prime contractor.
5. Any arrangement for joint checks must be in writing, and for a specific term (for example, one year, or a specified number of months) that does not exceed a reasonable time to establish a suitable credit line with the supplier.
6. The prime contractor may act solely as the payer of the joint check, and may not have responsibility for establishing the terms of the agreement between the DBE subcontractor and the supplier.
7. The DBE must be responsible for receiving the check from the prime contractor and delivering the check to the supplier.
8. The prime contractor cannot require the DBE subcontractor to use a specific supplier, and the prime contractor may not participate in the negotiation of unit prices between the DBE subcontractor and the supplier.

23.02 Procedure and Compliance:

1. BECO must approve the agreement for the use of joint checks in writing before any joint checks are issued. The prime contractor shall submit a DBE joint check request form, available from the BECO website, along with the joint check agreement, to LPA/Subrecipient and BECO through email within seven calendar days from the time the subcontract is executed.
2. After obtaining authorization from BECO for the use of joint checks, the prime contractor, the DBE, and the supplier must retain documentation to allow for efficient monitoring of the agreement by the LPA/Subrecipient.
3. Copies of canceled checks must be submitted, with the payment information for the period in which the joint check was issued, electronically through email to LPA/Subrecipient Procurement Office and made available for review at the time of the onsite CUF review. The prime contractor, DBE, and supplier each have an independent duty to report to the LPA/Subrecipient in the case of any change from the approved joint check arrangement.

4. Any failure to comply will be considered by the LPA/Subrecipient, with ADOT concurrence to be a material breach of this contract and will subject the prime contractor, DBE, and supplier to contract remedies and, in the case of serious violations, a potential for termination of the contract, or other remedies which may prevent future participation by the offending party.

24.0 DBE Termination/Substitution:

24.01 General Requirements:

The contractor shall make all reasonable efforts to avoid terminating or substituting a DBE listed on the DBE Intended Participation Affidavit Summary. At a minimum, the contractor shall negotiate in good faith, give timely notices and/or extend deadlines to the extent that it will not jeopardize the contract with the LPA/Subrecipient. Reasonable methods to resolve performance disputes must be applied and documentation provided to LPA/Subrecipient before attempting to substitute or terminate a DBE.

24.02 Contractor Notice of Termination/Substitution:

All terminations, substitutions, and reductions in scope of work to be performed by DBEs listed on the DBE Intended Participation Affidavit Summary must be approved in writing by the LPA/Subrecipient, with BECO concurrence. The contractor shall contact the LPA/Subrecipient within 24 hours from the first sign of any reason for potential DBE termination/substitution.

The contractor shall not terminate a DBE subcontractor listed on the DBE Intended Participation Affidavit or complete the work contracted to the DBE with its own forces or with a non-DBE firm without the LPA/Subrecipient written consent and BECO concurrence. Before submitting a formal request to the LPA/Subrecipient for DBE termination/substitution, the contractor shall give written notice to the DBE subcontractor with a copy to the LPA/Subrecipient of its intent to terminate or substitute the DBE identifying the reason for the action. The notice shall include the deadline for the DBE to submit a written response advising the contractor, LPA/Subrecipient of its position which shall be a minimum of five calendar days after the notice is given. Before making a determination for approval regarding the contractor's termination and substitution request, the LPA/Subrecipient, with BECO concurrence, will consider both the contractor's request and the DBE firm's response.

24.03 Contractor Request for Termination/Substitution:

The contractor shall formally request the termination or substitution of a DBE listed on the DBE Intended Participation Affidavit Summary by submitting the DBE Termination/Substitution Request form with supporting documentation to the LPA/Subrecipient; form is available from the LPA/Subrecipient. The submission shall include the following information:

- 1) The date the contractor determined the DBE to be unwilling, unable, or ineligible to perform.

- 2) A brief statement of facts describing the situation and citing specific actions or inaction by the DBE firm giving rise to contractor's assertion that the DBE firm is unwilling, unable, or ineligible to perform.
- 3) A brief statement of the good faith efforts undertaken by the contractor to enable the DBE firm to perform.
- 4) The total dollar amount currently paid for work performed by the DBE firm.
- 5) The total dollar amount remaining to be paid to the DBE firm for work completed, but for which the DBE firm has not received payment, and over which the contractor and the DBE firm have no dispute.
- 6) The projected date that the contractor requires a substitution or replacement DBE to commence work, if consent is granted to the request.
- 7) The DBE's response to the notice of intent to terminate. If there is no response from the DBE within the time allowed in the notice of intent to terminate, the contractor shall state that no response was received.

Written consent for terminating any DBE listed on the DBE Intended Participation Affidavit Summary will be granted only where the contractor can demonstrate good cause showing that the DBE is unable, unwilling, or ineligible to perform. Such written consent to terminate any DBE shall concurrently constitute written consent to substitute or replace the terminated DBE. Termination or substitution of a DBE listed on the DBE Intended Participation Affidavit Summary will not be allowed based solely on a contractor's ability to negotiate a more advantageous contract with another subcontractor. Prior to making a determination for approval regarding the contractor's termination and substitution request, the LPA/Subrecipient, with BECO concurrence, will consider both the contractor's request and the DBE firm's response.

24.04 Good Cause:

The LPA/Subrecipient, with BECO concurrence, will make the determination of good cause by providing written consent to the contractor after evaluating the contractor's good cause to terminate or substitute a DBE firm. Good cause for this purpose includes the following in relation to the listed DBE subcontractor:

1. Fails or refuses to execute a written contract.
2. Fails or refuses to perform the work of its subcontract in a way consistent with normal industry practice standards. However, good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor.
3. Fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond/insurance requirements.
4. Becomes bankrupt, insolvent, or exhibits credit unworthiness.
5. Is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to federal or state law.
6. Is not a responsible contractor.
7. Voluntarily withdraws from the project and provides written notice of its withdrawal to the Department.

8. Is ineligible to receive DBE credit for the type of work required.
9. A DBE owner dies or becomes disabled with the result that the firm is unable to complete its work on the contract.
10. Other documented good cause that the BECO determines compels the termination or substitution of the DBE subcontractor.

24.05 DBE Termination/Substitution Good Faith Effort:

If the LPA/Subrecipient approves the termination of a DBE, the contractor shall make good faith efforts to find another DBE subcontractor to substitute for the original DBE. The good faith efforts as identified in DBE Subsection 15.0 shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the contract goal. If a replacement DBE is not identified for the original DBE's work, the good faith efforts shall be documented and provided, upon request, to the LPA/Subrecipient within seven calendar days from the date of the request.

A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find the replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

The termination of a DBE firm shall not relieve the contractor of its obligations under this Special Provision, and the unpaid portion of the terminated DBE firm's subcontract will not be counted toward the DBE goal.

If the LPA/Subrecipient has eliminated items of work subcontracted to a committed DBE, the prime contractor shall still make good faith efforts to replace the DBE with another DBE to the extent necessary to meet the goal. The LPA/Subrecipient will review the quality, thoroughness, and intensity of those efforts and give consideration to when the change was made, the nature of the change, and other factors as determined by the LPA/Subrecipient.

When a DBE substitution has been approved by the LPA/Subrecipient and concurred by BECO, the contractor shall submit an amended DBE Intended Participation Affidavit and Intended Participation Affidavit Summary to LPA/Subrecipient Procurement Office for approval with the substitute DBE's name, description of work, NAICS code, AZ UTRACS registration number, and dollar value of work. Approval from LPA/Subrecipient with BECO concurrence must be obtained prior to the substituted DBE beginning work.

24.06 Sanctions:

Failure by the contractor to carry out the requirements of these DBE Termination/Substitution specifications is a material breach of contract and will result in such remedies as the LPA/Subrecipient deems appropriate, with ADOT concurrence, which will include, but are not limited to the assessment of liquidated damages. The LPA/Subrecipient will deduct from monies due or becoming due to the contractor, the dollar amount of the wrongfully

substituted/replaced DBE subcontract plus 25 percent of the amount remaining to be paid to the DBE as liquidated damages. These liquidated damages shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

25.0 Certification of Final DBE Payments:

The contractor's achievement of the goal is measured by actual payments made to the DBE. The contractor shall submit the "Certification of Final DBE Payments" form for each DBE firm working on the contract. This form shall be signed by the contractor and the relevant DBE, and submitted to the LPA/Subrecipient no later than 30 days after the DBE completes its work.

The LPA/Subrecipient and ADOT will use this certification and other information available to determine applicable DBE credit allowed to date by the contractor and the extent to which the DBE firms were fully paid for that work. By the act of filing the forms, the contractor acknowledges that the information is supplied in order to justify the payment of state and federal funds to the contractor.

The contractor will not be released from the obligations of the contract until the "Certification of Final DBE Payments" forms are received and deemed acceptable by the LPA/Subrecipient.

26.0 Sanctions for Not Meeting Contract DBE Goal:

If the LPA/Subrecipient determines, with BECO concurrence, that the contractor has, without justification, not met the established DBE goal the LPA/Subrecipient will, at its discretion, deduct up to two times the amount of the unattained portion of established DBE goal from monies due or becoming due the contractor as liquidated damages, based on the circumstances of the noncompliance.

The LPA/Subrecipient, with BECO concurrence, will determine whether liquidated damages will be assessed and the amount of the liquidated damages. The LPA/Subrecipient will consider whether there have been other violations on this or other contracts, whether the failure was due to circumstances beyond the control of the contractor, whether the contractor has made good faith efforts to meet the goal, and other appropriate circumstances.

The contractor may, within 15 calendar days of receipt of the decision of the LPA/Subrecipient escalate the decision to the State Engineer. If the contractor does not escalate the decision of the LPA/Subrecipient, in writing, within 15 calendar days of receipt of the decision, the contractor will be deemed to have accepted the decision and there will be no further remedy for the contractor.

In addition to any other sanctions, willful failure of the contractor, DBE or other subcontractor to comply with this contract or with the Federal DBE regulations may result in disqualification from further contracting, subcontracting, or other participation in the Department's and LPA/Subrecipient's projects.

27.0 False, Fraudulent, or Dishonest Conduct:

In addition to any other remedies or actions, the Department will bring to the attention of the US Department of Transportation any appearance of false, fraudulent, or dishonest conduct in connection with the DBE program, so that USDOT can take steps such as referral to the Department of Justice for criminal prosecution, referral to the USDOT Inspector General for possible initiation of suspension and debarment proceedings against the offending parties or application of "Program Fraud and Civil Penalties" rules provided in 49 CFR Part 31.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

LPA/SUBRECIPIENT FEDERAL AID CONTRACT WITH OR WITHOUT DBE GOAL

1. Assurances of Non-Discrimination: (LPA EPRISE 2.0)

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 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 or such other remedy as the LPA/Subrecipient, with the Department's concurrence, deems appropriate, which may include, but 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, subrecipient, or subcontractor shall ensure that all subcontract agreements contain this non-discrimination assurance.

2. Time is of the Essence: (LPA EPRISE 8.0)

TIME IS OF THE ESSENCE IN RESPECT TO THE DBE PROVISIONS.

3. Computation of Time: (LPA EPRISE 9.0)

In computing any period of time described in this DBE special provision, such as calendar days, the day from which the period begins to run is not counted, and when the last day of the period is a Saturday, Sunday, or Federal or State holiday, the period extends to the next day that is not a Saturday, Sunday, or Federal or State holiday. In circumstances where the LPA/Subrecipient Procurement Office is closed for all or part of the last day, the period extends to the next day on which the LPA/Subrecipient Procurement Office is open.

4. Crediting DBE Participation Toward Meeting Goals: (LPA EPRISE 18.0)

General Requirements:

To count toward meeting a goal, the DBE firm must be certified as of the deadline for submission of bids in each NAICS code applicable to the kind of work the firm will perform on the contract. NAICS for each DBE can be found on the AZ UTRACS under the Firm Directory. General descriptions of all NAICS codes can be found at www.naics.com.

Credit towards the contractor's DBE goal is given only after the DBE has been paid for the work performed.

The entire amount of a contract that is performed by the DBE's own forces, including the cost of supplies and materials purchased by the DBE for the work on the contract and equipment leased by the DBE will be credited toward DBE participation. Supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate will not be credited toward DBE participation. Work included in a force account item cannot be listed on the DBE Intended Participation Affidavit.

The contractor bears the responsibility to determine whether the DBE possesses the proper contractor's license(s) to perform the work and, if DBE credit is requested, that the DBE subcontractor is certified for the requested type of work.

If a DBE cannot complete its work due to failure to obtain or maintain its licensing, the contractor bears the responsibility to notify the LPA/Subrecipient immediately after the contractor becomes aware of the situation, and request approval to replace the DBE with another DBE. The contractor shall follow the DBE termination/substitution requirements described in Subsection 24.0 of these DBE provisions.

The Department's certification is not a representation of a DBE's qualifications and/or abilities. The contractor bears all risks that the DBE may not be able to perform its work for any reason.

A DBE may participate as a prime contractor, subcontractor, joint venture partner with either a prime contractor or a subcontractor, or as a vendor of materials or supplies. A DBE joint venture partner shall be responsible for a clearly defined portion of the work to be performed, in addition to meeting the requirements for ownership and control.

The dollar amount of work to be accomplished by DBEs, including partial amount of a lump sum or other similar item, shall be on the basis of subcontract, purchase order, hourly rate, rate per ton, etc., as agreed to between parties.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

With the exception of bond premiums, all work must be attributed to specific bid items. Where work applies to several items, the DBE contracting arrangement must specify unit price and amount attributable to each bid item. DBE credit for any individual item of work performed by the DBE shall be the lesser of the amount to be paid to the DBE or the prime contractor's bid price. If the amount bid by the DBE on any item exceeds the prime contractor's bid amount, the prime contractor may not obtain credit by attributing the excess to other items.

Where more than one DBE is engaged to perform parts of an item (for example, supply and installation), the total amount payable to the DBEs will not be considered in excess of the prime contractor's bid amount for that item.

Bond premiums may be stated separately, so long as the arrangement between the prime contractor and the DBE provides for separate payment not to exceed the price charged by the bonding company.

DBE credit may be obtained only for specific work done for the project, supply of equipment specifically for physical work on the project, or supply of materials to be incorporated in the work. DBE credit will not be allowed for costs such as overhead items, capital expenditures (for example, purchase of equipment), and office items.

If a DBE performs part of an item (for example, installation of materials purchased by a Non-DBE), the DBE credit shall not exceed the lesser of (1) the DBE's contract or (2) the prime contractor's bid for the item, less a reasonable deduction for the portion performed by the Non-DBE.

When a DBE performs as a partner in a joint venture, only that portion of the total dollar value of the contract which is clearly and distinctly performed by the DBE's own forces can be credited toward the DBE goal.

The contractor may credit second-tier subcontracts issued to DBEs by non-DBE subcontractors. Any second-tier subcontract to a DBE used to meet the goal must meet the requirements of a first-tier DBE subcontract.

A prime contractor may credit the entire amount of that portion of a construction contract that is performed by the DBE's own forces. The cost of supplies and materials obtained by the DBE for the work of the contract can be included so long as that cost is reasonable. Leased equipment may also be included. No credit is permitted for supplies purchased or equipment leased from the prime contractor or its affiliate(s).

When a DBE subcontracts a part of the work of its contract to another firm, the value of the subcontract may be credited towards the DBE goal only if the DBE's subcontractor is itself a DBE and performs the work with its own forces. Work that a DBE subcontracts to a non-DBE firm does not count toward a DBE goal.

A prime contractor may credit the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a USDOT-assisted contract, provided the fees are reasonable and not excessive as compared with fees customarily allowed for similar services.

DBE Prime Contractor:

When a certified DBE firm bids on a contract that contains a DBE goal, the DBE firm is responsible for meeting the DBE goal on the contract or making good faith efforts to meet the goal, just like any other bidder. In most cases, a DBE bidder on a contract will meet the DBE goal by virtue of the work it performs on the contract with its own forces. However, all the work that is performed by the DBE bidder or any other DBE subcontractors and DBE suppliers will count toward the DBE goal. The DBE bidder shall list itself along with any DBE subcontractors and suppliers, on the DBE Intended Participation Affidavit and Summary in order to receive credit toward the DBE goal.

Effect of Loss of DBE Eligibility:

If a DBE is deemed ineligible (decertified) or suspended in accordance with 49 CFR 26.87 and 26.88, the DBE may not be considered to meet a contract goal on a new contract, but may be considered to meet the contract goal under a subcontract that was executed before the DBE suspension or decertification is effective.

When a committed DBE firm or a DBE prime contractor loses its DBE eligibility and a subcontract or contract has not been executed before a decertification notice is issued to the DBE firm by its certifying agency, the ineligible firm does not count toward the contract goal. The contractor must meet the contract goal with an eligible DBE firm or firms or demonstrate good faith effort. When a subcontract is executed with the DBE firm before the Department notified the firm of its ineligibility, the contractor may continue to use the firm on the contract and may continue to receive credit toward the DBE goal for the firm's work.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

Notifying the Contractor of DBE Certification Status:

Each DBE contract of any tier shall require any DBE subcontractor or supplier that is either decertified or certified during the term of the contract to immediately notify the contractor and all parties to the DBE contract in writing, with the date of decertification or certification. The contractor shall require that this provision be incorporated in any contract of any tier in which a DBE is a participant.

Police Officers:

DBE credit will not be permitted for procuring DPS officers. For projects on which officers from other agencies are supplied, DBE credit will be given only for the broker fees charged, and will not include amounts paid to the officers. The broker fees must be reasonable.

Commercially Useful Function:

A prime contractor can credit expenditures to a DBE subcontractor toward DBE goals only if the DBE performs a Commercially Useful Function (CUF).

A DBE performs a CUF when it is responsible for execution of the work of a contract and carries out its responsibilities by actually 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 on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself that it uses on the project. To determine whether a DBE is performing a commercially useful function, the LPA/Subrecipient will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

A DBE will not be considered to perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, the LPA/Subrecipient will examine similar transactions, particularly those in which DBEs do not participate.

If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or 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 LPA/Subrecipient will presume that the DBE is not performing a commercially useful function.

When a DBE is presumed not to be performing a commercially useful function as provided above, the DBE may present evidence to rebut this presumption. The LPA/Subrecipient will determine if the firm is performing a CUF given the type of work involved and normal industry practices.

The LPA/Subrecipient will notify the contractor, in writing, if it determines that the contractor's DBE subcontractor is not performing a CUF. The contractor will be notified within seven calendar days of the LPA/Subrecipient's decision.

Decisions on CUF may be appealed to the ADOT BECO. The appeal must be in writing and personally delivered or sent by certified mail, return receipt requested, to the ADOT BECO. The appeal must be received by the ADOT BECO no later than seven calendar days after the decision of LPA/Subrecipient. LPA/Subrecipient decision remains in effect unless and until ADOT BECO reverses or modifies LPA/Subrecipient decision. ADOT BECO will promptly consider any appeals under this subsection and notify the contractor of the ADOT BECO findings and decisions. Decisions on CUF matters are not administratively appealable to USDOT.

The LPA/Subrecipient will conduct project site visits on the contract to confirm that DBEs are performing a CUF. The contractor shall cooperate during the site visits and the LPA/Subrecipient staff will make every effort not to disrupt work on the project.

Trucking:

LPA/Subrecipient will use the following factors in determining whether a DBE trucking company is performing a commercially useful function. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract on every day that credit is to be given for trucking.

The contractor will receive credit for the total value of transportation services provided by the DBE using trucks it owns, insures and operates, and 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 DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks with drivers from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE leased trucks with drivers not to exceed the value of transportation services on the contract provided by DBE-owned trucks or leased trucks with DBE employee drivers. Additional participation by non-DBE owned trucks with drivers receives credit only for the fee or commission paid to the DBE as a result of the lease agreement.

Example: DBE Firm X uses two of its own trucks on a contract. It leases two trucks from DBE Firm Y and six trucks from non-DBE firm Z. DBE credit would be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four of the six trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight trucks. DBE credit could be awarded only for the fees or commissions pertaining to the remaining trucks Firm X receives as a result of the lease with Firm Z.

The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.

Example: DBE Firm X uses two of its own trucks on a contract. It leases three additional trucks from non-DBE Firm Z. Firm X uses its own employees to drive the trucks leased from Firm Z. DBE credit would be awarded for the total value of the transportation services provided by all five trucks.

For purposes of this section, a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE. Credit will be allowed only for those lease costs related to the time each truck is devoted to the project.

DBE credit for supplying paving grade asphalt and other asphalt products will only be permitted for standard industry hauling costs, and only if the DBE is owner or lessee of the equipment and trucks. Leases for trucks must be long term (extending for a fixed time period and not related to time for contract performance) and must include all attendant responsibilities such as insurance, titling, hazardous waste requirements, and payment of drivers.

Materials and Supplies:

LPA/Subrecipient will credit expenditures with DBEs for material and supplies towards the DBE goal as follows. If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies is credited.

A manufacturer is defined as a firm that 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.

If the materials or supplies are purchased from a DBE regular dealer, 60 percent of the cost of the materials or supplies is credited. A DBE regular dealer is defined as a firm that owns, operates, or maintains a store or 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 stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A firm may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, stone or asphalt without owning, operating, or maintaining a place of business, as provided above, if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement, and not on an ad-hoc or contract-by-contract basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph and the paragraph above.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, the LPA/Subrecipient will credit the entire amount of the fees or commissions charged by the DBE for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services. The cost of the materials and supplies themselves may not be counted toward the DBE goal.

The LPA/Subrecipient will credit expenditures with DBEs for material and supplies (e.g. whether a firm is acting as a regular dealer or a transaction expeditor) towards the DBE goal on a contract-by-contract basis. The fact that a DBE firm qualifies under a classification (manufacturer, regular dealer or supplier) for one contract does not mean it will qualify for the same classification on another contract. The bidder shall be responsible for verifying whether a DBE qualifies as a DBE manufacturer, regular dealer or supplier. The bidder may contact the LPA/Subrecipient for assistance in this determination.

5. Effect of Contract Changes: (LPA EPRISE 19.0)

If for any reason it becomes apparent that the DBE goal will not be met then the contractor shall: (1) immediately notify the LPA/Subrecipient of the potential or actual decrease in DBE compensation, and (2) make good faith efforts to obtain DBE participation to meet or exceed the DBE contract goal. Good faith efforts required under the provisions of this section may vary, depending on the time available, the nature of the change, who initiated the change, and other factors as determined by LPA/Subrecipient.

LPA/Subrecipient will approve or deny the contractor's good faith efforts with BECO concurrence.

The contractor is not required to take work committed to another subcontractor and assign it to a DBE subcontractor in order to meet the committed DBE percentage.

If the resulting change increases the scope or quantity of work being done by a DBE subcontractor, the DBE shall be given the opportunity to complete the additional work and receive additional compensation beyond their original subcontract amount.

6. DBE Participation Above the Goal (Race Neutral Participation): (LPA EPRISE 20.0)

Additional DBE participation above the DBE participation required to meet the contract DBE goal is an important aspect of the Department's DBE program. The contractor is strongly encouraged to use additional DBEs above the DBE goal requirement in the contract to assist the Department in meeting its overall DBE goal and help the Department to meet the maximum feasible portion of its DBE goals through race neutral participation as outlined in 49 CFR Part 26.

There are fewer administrative requirements on the part of the contractor when using race neutral DBEs (DBEs not listed on the DBE Intended Participation Affidavit Summary). For example, if a DBE is not listed on the DBE Intended Participation Affidavit Summary, the DBE does not have to submit an Affidavit, and the subcontract approval process follows the same process of any other subcontract. The contractor does not have to replace the race neutral DBE with another DBE subcontractor if the race neutral DBE fails to perform. Therefore these DBEs are treated as any other subcontractor on the project.

7. Required Provisions for DBE Subcontracts: (LPA EPRISE 21.0)

All subcontracts of any tier, all supply contracts, and any other contracts in which a DBE is a party shall include, as a physical attachment, DBE Subcontract Compliance Assurances available from the LPA/Subrecipient.

Contractors executing agreements with subcontractors, DBE or non-DBE, that materially modify federal regulation and state statutes such as, prompt payment and retention requirements, through subcontract terms and conditions will be found in breach of contract which may result in termination of the contract, or any other such remedy as the LPA/Subrecipient and ADOT deem appropriate as outlined in DBE Subsection 2.0.

LPA/Subrecipient reserves the right to conduct random reviews of DBE and non-DBE subcontract documentation to ensure compliance with federal requirements.

The contractor shall ensure that all subcontracts or agreements with DBEs to supply labor or materials require that the subcontract and all lower tier subcontracts be performed in accordance with 49 CFR Part 26.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

The Contractor shall provide electronic copies of signed subcontract agreements for all DBE Subcontracts listed on the DBE Intended Participation Affidavit Summary by uploading them within 15 calendar days of an approved contract to the LPA DBE System.

8. Contract Performance: (LPA EPRISE 22.0)

Contract items of work designated by the contractor to be awarded to DBEs shall be performed by the designated DBE or a LPA/Subrecipient, with BECO concurrence, approved DBE substitute. DBE contract work items shall not be performed by the contractor, or a non-DBE subcontractor without prior approval by the LPA/Subrecipient, with BECO concurrence. The DBE must perform a commercially useful function; that is, the DBE must manage, perform, and supervise a distinct element of work.

The contractor is required to use DBEs identified to meet the contract goal, so the prime contractor is responsible for ensuring that the DBEs are available to meet scheduling, work and other requirements on the contract.

LPA/Subrecipient will conduct reviews to ensure compliance with DBE requirements. The reviews may include, among other activities, interview of DBEs and their employees and the contractor and its employees. The contractor shall cooperate in the review and make its employees available. The contractor shall inform the LPA/Subrecipient in advance when each DBE will be working on the project to help facilitate reviews.

LPA/Subrecipient reserves the right to inspect all records of the contractor and all records of the DBEs and non-DBE subcontractors concerning this contract. The contractor must make all documents related to all contracts available to the LPA/Subrecipient upon request.

The contractor shall provide to the LPA/Subrecipient, at the pre-construction conference, copies of all completed, approved, and signed subcontracts, purchase orders, invoices, etc., with all committed DBEs. These documents shall include the AZ UTRACS Registration number for the subcontractor or materials supplier.

Use of every DBE listed on the DBE Intended Participation Affidavit Summary is a condition of this contract. The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed on the Intended Participation Affidavit Summary unless the contractor obtains written consent from the LPA/Subrecipient with BECO concurrence. The contractor shall not be entitled to any payment for work or material that is not performed or supplied by the listed DBE, unless the contractor obtains written consent from the LPA/Subrecipient with BECO concurrence.

9. Joint Checks: (LPA EPRISE 23.0)

Requirements:

A DBE subcontractor and a material supplier (or equipment supplier) may request permission for the use of joint checks for payments from the prime contractor to the DBE subcontractor and the supplier. Joint checks may be issued only if all the conditions in this subsection are met.

1. The DBE subcontractor must be independent from the prime contractor and the supplier, and must perform a commercially useful function. The DBE subcontractor must be responsible for negotiating the price of the material, determining quality and quantity, ordering the materials, installing (where applicable), and paying for the material. The DBE subcontractor may not be utilized as an extra participant in a transaction, contract, or project in order to obtain the appearance of DBE participation.
2. The use of joint checks will be allowed only if the prime contractor, DBE subcontractor, and material supplier establish that the use of joint checks in similar transactions is a commonly recognized business practice in the industry, particularly with respect to similar transactions in which DBE's do not participate.
3. A material or supply contract may not bear an excessive ratio relative to the DBE subcontractor's normal capacity.
4. There may not be any exclusive arrangement between one prime and one DBE in the use of joint checks that may bring into question whether the DBE is independent of the prime contractor.
5. Any arrangement for joint checks must be in writing, and for a specific term (for example, one year, or a specified number of months) that does not exceed a reasonable time to establish a suitable credit line with the supplier.
6. The prime contractor may act solely as the payer of the joint check, and may not have responsibility for establishing the terms of the agreement between the DBE subcontractor and the supplier.
7. The DBE must be responsible for receiving the check from the prime contractor and delivering the check to the supplier.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

8. The prime contractor cannot require the DBE subcontractor to use a specific supplier, and the prime contractor may not participate in the negotiation of unit prices between the DBE subcontractor and the supplier.

Procedure and Compliance:

1. BECO must approve the agreement for the use of joint checks in writing before any joint checks are issued. The prime contractor shall submit a DBE joint check request form, available from the BECO website, along with the joint check agreement, to LPA/Subrecipient and BECO through email within seven calendar days from the time the subcontract is executed.
2. After obtaining authorization from BECO for the use of joint checks, the prime contractor, the DBE, and the supplier must retain documentation to allow for efficient monitoring of the agreement by the LPA/Subrecipient.
3. Copies of canceled checks must be submitted, with the payment information for the period in which the joint check was issued, electronically through email to LPA/Subrecipient Procurement Office and made available for review at the time of the onsite CUF review. The prime contractor, DBE, and supplier each have an independent duty to report to the LPA/Subrecipient in the case of any change from the approved joint check arrangement.
4. Any failure to comply will be considered by the LPA/Subrecipient, with ADOT concurrence to be a material breach of this contract and will subject the prime contractor, DBE, and supplier to contract remedies and, in the case of serious violations, a potential for termination of the contract, or other remedies which may prevent future participation by the offending party.

10. DBE Termination/Substitution:

(LPA EPRISE 24.0)

General Requirements:

The contractor shall make all reasonable efforts to avoid terminating or substituting a DBE listed on the DBE Intended Participation Affidavit Summary. At a minimum, the contractor shall negotiate in good faith, give timely notices and/or extend deadlines to the extent that it will not jeopardize the contract with the LPA/Subrecipient. Reasonable methods to resolve performance disputes must be applied and documentation provided to LPA/Subrecipient before attempting to substitute or terminate a DBE.

Contractor Notice of Termination/Substitution:

All terminations, substitutions, and reductions in scope of work to be performed by DBEs listed on the DBE Intended Participation Affidavit Summary must be approved in writing by the LPA/Subrecipient, with BECO concurrence. The contractor shall contact the LPA/Subrecipient within 24 hours from the first sign of any reason for potential DBE termination/substitution.

The contractor shall not terminate a DBE subcontractor listed on the DBE Intended Participation Affidavit or complete the work contracted to the DBE with its own forces or with a non-DBE firm without the LPA/Subrecipient written consent and BECO concurrence. Before submitting a formal request to the LPA/Subrecipient for DBE termination/substitution, the contractor shall give written notice to the DBE subcontractor with a copy to the LPA/Subrecipient of its intent to terminate or substitute the DBE identifying the reason for the action. The notice shall include the deadline for the DBE to submit a written response advising the contractor, LPA/Subrecipient of its position which shall be a minimum of five calendar days after the notice is given. Before making a determination for approval regarding the contractor's termination and substitution request, the LPA/Subrecipient, with BECO concurrence, will consider both the contractor's request and the DBE firm's response.

Contractor Request for Termination/Substitution:

The contractor shall formally request the termination or substitution of a DBE listed on the DBE Intended Participation Affidavit Summary by submitting the DBE Termination/Substitution Request form with supporting documentation to the LPA/Subrecipient; form is available from the LPA/Subrecipient. The submission shall include the following information:

1. The date the contractor determined the DBE to be unwilling, unable, or ineligible to perform.
2. A brief statement of facts describing the situation and citing specific actions or inaction by the DBE firm giving rise to contractor's assertion that the DBE firm is unwilling, unable, or ineligible to perform.
3. A brief statement of the good faith efforts undertaken by the contractor to enable the DBE firm to perform.
4. The total dollar amount currently paid for work performed by the DBE firm.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

5. The total dollar amount remaining to be paid to the DBE firm for work completed, but for which the DBE firm has not received payment, and over which the contractor and the DBE firm have no dispute.
6. The projected date that the contractor requires a substitution or replacement DBE to commence work, if consent is granted to the request.
7. The DBE's response to the notice of intent to terminate. If there is no response from the DBE within the time allowed in the notice of intent to terminate, the contractor shall state that no response was received.

Written consent for terminating any DBE listed on the DBE Intended Participation Affidavit Summary will be granted only where the contractor can demonstrate good cause showing that the DBE is unable, unwilling, or ineligible to perform. Such written consent to terminate any DBE shall concurrently constitute written consent to substitute or replace the terminated DBE. Termination or substitution of a DBE listed on the DBE Intended Participation Affidavit Summary will not be allowed based solely on a contractor's ability to negotiate a more advantageous contract with another subcontractor. Prior to making a determination for approval regarding the contractor's termination and substitution request, the LPA/Subrecipient, with BECO concurrence, will consider both the contractor's request and the DBE firm's response.

Good Cause:

The LPA/Subrecipient, with BECO concurrence, will make the determination of good cause by providing written consent to the contractor after evaluating the contractor's good cause to terminate or substitute a DBE firm. Good cause for this purpose includes the following in relation to the listed DBE subcontractor:

1. Fails or refuses to execute a written contract.
2. Fails or refuses to perform the work of its subcontract in a way consistent with normal industry practice standards. However, good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor.
3. Fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond/insurance requirements.
4. Becomes bankrupt, insolvent, or exhibits credit unworthiness.
5. Is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to federal or state law.
6. Is not a responsible contractor.
7. Voluntarily withdraws from the project and provides written notice of its withdrawal to the Department.
8. Is ineligible to receive DBE credit for the type of work required.
9. A DBE owner dies or becomes disabled with the result that the firm is unable to complete its work on the contract.
10. Other documented good cause that the BECO determines compels the termination or substitution of the DBE subcontractor.

DBE Termination/Substitution Good Faith Effort:

If the LPA/Subrecipient approves the termination of a DBE, the contractor shall make good faith efforts to find another DBE subcontractor to substitute for the original DBE. The good faith efforts as identified in DBE Subsection 15.0 shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the contract goal. If a replacement DBE is not identified for the original DBE's work, the good faith efforts shall be documented and provided, upon request, to the LPA/Subrecipient within seven calendar days from the date of the request.

A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find the replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

The termination of a DBE firm shall not relieve the contractor of its obligations under this Special Provision, and the unpaid portion of the terminated DBE firm's subcontract will not be counted toward the DBE goal.

If the LPA/Subrecipient has eliminated items of work subcontracted to a committed DBE, the prime contractor shall still make good faith efforts to replace the DBE with another DBE to the extent necessary to meet the goal. The LPA/Subrecipient will review the quality, thoroughness, and intensity of those efforts and give consideration to when the change was made, the nature of the change, and other factors as determined by the LPA/Subrecipient.



CONSTRUCTION CONTRACTS
LPA DBE SUBCONTRACT COMPLIANCE ASSURANCES
(07/01/2016)

When a DBE substitution has been approved by the LPA/Subrecipient and concurred by BECO, the contractor shall submit an amended DBE Intended Participation Affidavit and Intended Participation Affidavit Summary to LPA/Subrecipient Procurement Office for approval with the substitute DBE's name, description of work, NAICS code, AZ UTRACS registration number, and dollar value of work. Approval from LPA/Subrecipient with BECO concurrence must be obtained prior to the substituted DBE beginning work.

Sanctions:

Failure by the contractor to carry out the requirements of these DBE Termination/Substitution specifications is a material breach of contract and will result in such remedies as the LPA/Subrecipient deems appropriate, with ADOT concurrence, which will include, but are not limited to the assessment of liquidated damages. The LPA/Subrecipient will deduct from monies due or becoming due to the contractor, the dollar amount of the wrongfully substituted/replaced DBE subcontract plus 25 percent of the amount remaining to be paid to the DBE as liquidated damages. These liquidated damages shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

11. Certification of Final DBE Payments: (LPA EPRISE 25.0)

The contractor's achievement of the goal is measured by actual payments made to the DBE. The contractor shall submit the "Certification of Final DBE Payments" form for each DBE firm working on the contract. This form shall be signed by the contractor and the relevant DBE, and submitted to the LPA/Subrecipient no later than 30 days after the DBE completes its work.

The LPA/Subrecipient and ADOT will use this certification and other information available to determine applicable DBE credit allowed to date by the contractor and the extent to which the DBE firms were fully paid for that work. By the act of filing the forms, the contractor acknowledges that the information is supplied in order to justify the payment of state and federal funds to the contractor.

The contractor will not be released from the obligations of the contract until the "Certification of Final DBE Payments" forms are received and deemed acceptable by the LPA/Subrecipient.

12. Sanctions for Not Meeting Contract DBE Goal: (LPA EPRISE 26.0)

If the LPA/Subrecipient determines, with BECO concurrence, that the contractor has, without justification, not met the established DBE goal the LPA/Subrecipient will, at its discretion, deduct up to two times the amount of the unattained portion of established DBE goal from monies due or becoming due the contractor as liquidated damages, based on the circumstances of the noncompliance.

The LPA/Subrecipient, with BECO concurrence, will determine whether liquidated damages will be assessed and the amount of the liquidated damages. The LPA/Subrecipient will consider whether there have been other violations on this or other contracts, whether the failure was due to circumstances beyond the control of the contractor, whether the contractor has made good faith efforts to meet the goal, and other appropriate circumstances.

The contractor may, within 15 calendar days of receipt of the decision of the LPA/Subrecipient escalate the decision to the State Engineer. If the contractor does not escalate the decision of the LPA/Subrecipient, in writing, within 15 calendar days of receipt of the decision, the contractor will be deemed to have accepted the decision and there will be no further remedy for the contractor.

In addition to any other sanctions, willful failure of the contractor, DBE or other subcontractor to comply with this contract or with the Federal DBE regulations may result in disqualification from further contracting, subcontracting, or other participation in the Department's and LPA/Subrecipient's projects.

27.0 False, Fraudulent, or Dishonest Conduct: (LPA EPRISE 27.0)

In addition to any other remedies or actions, the Department will bring to the attention of the US Department of Transportation any appearance of false, fraudulent, or dishonest conduct in connection with the DBE program, so that USDOT can take steps such as referral to the Department of Justice for criminal prosecution, referral to the USDOT Inspector General for possible initiation of suspension and debarment proceedings against the offending parties or application of "Program Fraud and Civil Penalties" rules provided in 49 CFR Part 31.

EQUAL EMPLOYMENT OPPORTUNITY
COMPLIANCE REPORTS

(Project, Training and Annual)

Federal-Aid Projects

February 1, 1977; Revised July 1, 1978; Revised November 3, 1980
Revised April 15, 1981; Revised September 7, 1983
Revised October 15, 1998; Revised August, 1, 2005;
Revised March 1, 2015, Revised August 24, 2016

ANNUAL REPORT:

For each contract in the amount of \$10,000 or more, and for each subcontract, regardless of tier not including material suppliers, in the amount of \$10,000 or more, the contractor and each subcontractor regardless of tier shall submit an annual Equal Employment Opportunity (EEO) Report containing all the information required on Form FHWA-1391.

The staffing figures to be reported should represent the project workforce on board in all or any part of the last payroll period preceding the end of July.

The report shall be submitted no later than August 15 to the agency (contract owner) compliance officer.

ARIZONA DEPARTMENT OF TRANSPORTATION

BUSINESS ENGAGEMENT AND COMPLIANCE OFFICE

Disadvantaged Business Enterprises (DBE)

Good Faith Efforts (GFE) Guide

For Construction Projects

For use in bidding federally funded Arizona Department of Transportation (ADOT) projects subject to the Disadvantaged Business Enterprises (DBE) Program.

The purpose of the GFE Guide is to help Bidders understand the type of documentation that is required if the Bidder has indicated on the *DBE Assurance Form* that the goal will not be met. GFE documentation must be submitted within seven (7) calendar days following the bid opening. Failure to submit good faith effort documentation within the required time period will render the bid non-responsive.

For questions about this guide or any components of the DBE Good Faith Effort, please contact the ADOT Business Engagement and Compliance Office (BECO) at (602) 712-7761 or ContractorCompliance@azdot.gov.

DISADVANTAGED BUSINESS ENTERPRISES GFE GUIDE

TABLE OF CONTENTS

SECTION 1.0 PURPOSE	3
1.01 CRITICAL INITIAL GFE REQUIREMENTS.....	3
1.02 GFE DOCUMENTATION REVIEW.....	3
SECTION 2.0 GOOD FAITH EFFORT SUBMITTAL	4
2.01 GFE SUBMISSION.....	4
2.02 GFE LETTER.....	4
SECTION 3.0 DBE GOAL NOTICE	5
SECTION 4.0 DBE ASSURANCE CERTIFICATE	6
4.01 EXHIBIT A.....	6
SECTION 5.0 GOOD FAITH EFFORTS	
5.01 CONTACT BECO IF UNABLE TO MEET DBE GOAL.....	7
5.02 SOLICITING THROUGH ALL REASONABLE AND AVAILABLE MEANS.....	8
5.03 SELECTING PORTIONS OF WORK.....	10
5.04 PROVIDE INTERESTED DBES WITH PROJECT INFORMATION.....	11
5.05 NEGOTIATE IN GOOD FAITH WITH INTERESTED DBES.....	12
5.06 HAVING SOUND REASON FOR REJECTING DBES.....	15
5.07 ASSISTING INTERESTED DBES – BONDING, CREDIT, INSURANCE.....	16
5.08 ASSISTING INTERESTED DBES – EQUIPMENT, SUPPLIES, MATERIALS, RELATED SERVICES.....	17
5.09 MINORITY/WOMEN COMMUNITY ORGANIZATIONS.....	18
SECTION 6.0 APPENDIX A TO PART 26 – GUIDANCE CONCERNING GFEs	22

SECTION 1.0 PURPOSE

This guide contains suggested information and forms bidders can use to help prepare good faith effort documentation. Good faith efforts must be performed well in advance of bid opening.

1.01 CRITICAL INITIAL GFE REQUIREMENTS

1. **CONTACT BECO FOR ASSISTANCE** - As soon as the bidder is aware it is unable to meet the goal, the bidder must contact BECO for assistance. Any solicitations made to interested DBEs must be done no less than ten (10) calendar days prior to bid opening.
2. **DO NOT CHANGE POSITION AFTER BID PROPOSAL** – If the bidder certifies that it has been unable to meet the goal and has made a good faith effort, the bidder cannot change its position after submission of the bid and claim to have met the established goal.

As specified in *Section 13.0 Submission with Bids* of the Disadvantaged Business Enterprises (DBE), Contract Special Provisions (EPRISE, 07/01/16), all Bidders shall submit information to demonstrate that good faith efforts to meet the DBE goal has been made if their *Disadvantaged Business Enterprise Assurances* certificate (Section 4.01 Exhibit A) indicates that the DBE goal will not be met.

1.02 GFE DOCUMENTATION REVIEW

All Bidders are encouraged to consider this GFE Guide. Reviews of GFE documentation will focus on items identified in Section 5.0 of this guide. The items in Section 5.0 are not intended to be an exclusive or exhaustive checklist. Other factors or types of efforts documented shall be relevant in appropriate cases.

SECTION 2.0 GOOD FAITH EFFORT SUBMITTAL

2.01 GFE SUBMISSION

The bidder may submit its documentation one of three ways:

1. Hard copy to: Business Engagement & Compliance Office
1801 W. Jefferson St. Ste. 101 (MD 154A)
Phoenix, AZ 85007
2. Fax to: (602) 712-8429
3. Email to: contractorcompliance@azdot.gov – Please be sure that all emails reach its destination by 4:00 PM of the final submission day (usually 5 days after bid opening).
Emailed documentation received after 4:00 PM will not be included in the GFE review.

2.02 GFE LETTER

The letter should include the following information:

- Project Name
- Project TRACS Number
- Federal Project Number
- Name of person submitting documentation
- Phone Number
- Signature
- Company Name
- Street Address
- City, State, Zip Code
- Telephone number
- Fax number
- Email address
- Contact Person
- Contact Person's Telephone Number

The letter should include an overview of good faith efforts and any necessary explanations of the documentation submitted.

SECTION 3.0 DBE GOAL NOTICE

3.01 NOTICE TO BIDDERS

The DBE goal is project-specific and is listed in the "Notice to Bidders."

In the Notice to Bidders:

THIS IS A FEDERAL AID CONTRACT. THE DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACT GOAL IS [X.XX %]. YOU MUST MEET THIS DBE GOAL AND/OR PROVIDE ADEQUATE GOOD FAITH EFFORT DOCUMENTATION AS OUTLINED IN THESE SPECIAL PROVISIONS. TO COMPLY WITH ADOT'S DBE PROGRAM GOOD FAITH EFFORT, THE BIDDER MUST TAKE CERTAIN ACTIONS A MINIMUM OF FIFTEEN (15) DAYS PRIOR TO BID OPENING.

All Good Faith Effort documentation must be received by BECO no later than 4:00 P.M. on the seventh calendar day following the bid opening.

Failure to submit good faith effort documentation within the required time period will render the bid nonresponsive. Refer for specific bid requirements to the Disadvantaged Business Enterprises (DBE), Contract Special Provisions (EPRISE, 07/01/16)

For Good Faith Effort assistance, please contact BECO at (602) 712-7761 or email ContractorCompliance@azdot.gov.

SECTION 4.0 DBE ASSURANCE CERTIFICATE

4.01 EXHIBIT A

This form is included in the electronic bid documents and shall be completed and submitted as part of the bid submittal. The form is used to identify if a Bidder can or cannot meet the DBE goal required on the contract. Bids submitted with altered, incomplete or unsigned form will be considered nonresponsive.

DISADVANTAGED BUSINESS ENTERPRISE ASSURANCE	
The undersigned, fully cognizant of the requirements and of the goal established, hereby certifies that in the preparation of this bid for federal aid project	
Project No: _____	Exhibit A
Project Name: _____	
(CHECK ONE)	
_____	The established goal for DBE participation will be met and agreements have been made with certified DBEs, or
_____	The bidder has been unable to meet the goal prior to the submission of the bid and has made good faith efforts to do so.
THIS AFFIDAVIT MAY NOT BE REVISED OR CORRECTED AFTER SUBMISSION OF THE BID.	
In accordance with the Special Provisions, the bidder shall specify its DBE participation on the "DBE Intended Participation Affidavit", or provide documentation of its good faith efforts, by 4:00 p.m. on the fifth working day following the bid opening. The apparent low bidder shall obtain the required affidavit from the Business Engagement & Compliance Office , 1135 N. 22nd Avenue (second floor), Phoenix, AZ, 85009, following the opening of bids.	
_____ Print Name of Firm	
_____ Print Name of Authorized Officer of Firm	
_____ Signature of Authorized Officer of Firm	
_____ Title	

SECTION 5.0 GOOD FAITH EFFORTS

GFE documentation, identified herein, to be provided by Bidders as part of Good Faith Effort will assist ADOT and its Subrecipients/Subgrantees/Local Public Agencies (LPAs) in determining whether the Bidder has performed its due diligence, took all necessary and reasonable steps to secure DBE participation for the contract pursuant to DBE Contract Special Provisions (EPRISE 07/01/16), *Section 15.0 Documented Good Faith Effort* and Appendix A to Part 26. BECO will review the GFE documentation and will recommend to the State Engineer whether the Bidder has made satisfactory good faith efforts to secure sufficient DBE participation to meet the contract goal. The Business Engagement and Compliance Office will make the final determination of Bidder’s meeting (or not meeting) the GFE requirements.

The burden of proof rests with the Bidder.

The following sections are a restatement of the Good Faith Efforts outlined in *Section 15.0 Documented Good Faith Effort* of the DBE Special Provisions (EPRISE 07/01/16). Additional guidance over what is outlined in the provisions is provided herein, along with documentation examples.

The types of actions Bidders take and the documentation necessary to establish good faith efforts to meet the DBE goal can include, but not limited, to the following activities (Sections 5.01, 5.02, etc.).

5.01 CONTACT BECO IF UNABLE TO MEET DBE GOAL

Purpose: To communicate with BECO prior to the submission of bids, either by e-mail, telephone, or any other communication avenue to inform BECO of the firm’s difficulty in meeting the DBE goals on a given project, and request assistance.

Action: Contact BECO at the first indication of not being able to locate DBEs for a specific project. The bidder must document its contact with BECO, indicate the type of contact, the date and time of the contact, the name of the person(s) contacted, and any details related to the communication. The contact must be made in sufficient time before bid submission to allow BECO to provide effective assistance.

The bidder will not be considered to have made good faith efforts if the bidder failed to contact BECO.

Document and retain all communications (e.g., phone, fax, email, mail) conducted with BECO staff.

SECTION 5.01	CONTACT BECO	EXAMPLE
--------------	--------------	---------

Occurrence	Date	BECO Staff Name or Email	Bidder’s Contact Name	Comment
1.				
2.				
3.				

5.02 SOLICIT THROUGH ALL REASONABLE AND AVAILABLE MEANS

Purpose: To identify all reasonable and available activities the Bidder performed to solicit the interest of all certified DBEs who have the capacity and ability to perform work on the project.

Action: Identify and list all activities the Bidder engaged in to solicit DBEs using all reasonable and available means.

Bidder's GFE Documentation:

- 1) Provide a list of activities performed to solicit DBEs.
- 2) Identify and **provide documentation**:
 - a. Activity undertaken, such as:
 - advertising – copies or print screens of online project advertisement (See *Section 5.03 Selecting Portions of Work* for example of an advertisement),
 - pre-bid meeting sign-in sheets,
 - business matchmaking meetings or events – proof of attendance,
 - written notice(s) sent – letters, fax or emails to DBEs,
 - any other market research conducted to identify and solicit DBE contractors and suppliers
 - b. Date action was taken;
 - c. Name of DBEs that showed interest;
 - d. Date of Bidder's follow-up with the interested DBEs

SECTION 5.02	SOLICITING	EXAMPLES
--------------	------------	----------

Bidder Activity (Advertising, Pre-bid meeting, business event, written notice, etc.)	Date	Name of DBE(s) Interested	Date Bidder Follow-up

Example of Written Notice with Fax Transmittal

HP LaserJet 3100
Printer/Fax/Copier/Scanner

SEND CONFIRMATION REPORT for
ABC Construction Company
623-321-7655
January – 29 – 13 2:34 PM

Job	Start Time	Usage	Phone Number or ID	TYPE	Pages	Mode	Status
542	1/29 2:34pm	0'35"	19257484577	Send	1/1	EC144	Complete

ABC Construction Company
123 Main Street
Anytown, CA 98765
925-321-7655 Fax: 925-321-7655

abconstruction@aol.com

INVITATION TO BID

January 29, 2013

The Electric Shop
1210 Cedar Avenue
Pleasanton, CA 94588

Telephone: 925-748-1327
Fax: 925-748-4577

ABC Construction Company is seeking quotes from qualified MBE/WBE/SBE/OBE/LBE/DVBE businesses and invites your bid/quote on the following listed project/contract:

Project: El Sobrante Area Overlays/Pavement Replacement, El Sobrante, CA
Approx. Value: \$2,415,218
No. of Working Days: 60
Owner: Contra Costa County Bids Due: 2-10-13 @ 2 pm

Seeking all trades including but not limited to: earthwork, asphalt, concrete, rebar, fencing, electrical, fire protect, lath/plaster/drywall, structural steel, mechanical, sheet metal, insulation and other related trades.

We are an equal opportunity employer and intend to seriously negotiate with qualified DBEs for project participation. For assistance in obtaining bonds, lines of credit, and/or insurance please contact Roger Smith. Plans, specifications and requirements for the project are available for review at our office or at the Contra Costa County Public Works Dept. 255 Glacier Drive, Martinez, CA, 94553 and are available online at www.cccounty.us/pwprojects. Please contact us at the above listed number for further information regarding bidding on this project.

Please fax your response to: Rodger Smith at 925-321-7655

We will be bidding Yes _____ No _____

Sincerely,

Rodger Smith
ABC Construction Company

5.03 SELECTING PORTIONS OF WORK

Purpose: To ensure work items are broke out into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

Action: Identify economically feasible work units to be performed by DBEs

Bidder’s GFE Documentation

- 1) Identify documentation of the following:
 - a. Activity undertaken, such as:
 - List of work items needed to be performed,
 - Breaking large work tasks into partial work items (smaller tasks or quantities),
 - Flexible time frames for performance and delivery schedules

SECTION 5.03	SELECTING PORTIONS OF WORK	EXAMPLE
--------------	----------------------------	---------

Posted in Arizona Builder Exchange website on January 15, 2014

ABC Construction Company is requesting sub-bids from qualified DBE subcontractors, suppliers, manufacturers & truckers for: ADOT Phoenix, AZ

Project: Broadway Area Infrastructure Program Phase 3.A
 Project#: 0662-GR4141-02
 Engineer Est.: \$450,000
 No. Working Days: 30
 Bid Due Date: 2/10/14 at 2 pm

For the following (but not limited to) work items:

- traffic control,
- construction area signs,
- trucking,
- hazardous materials removal,
- grinding,
- striping,
- electrical,
- asphalt, concrete,

If you are interested in bidding on this work or know someone who is, please contact Steve @ 623-321-7654, Fax: 623-321-7655 or email steve@Mail.com
 Plans, Specs, and Requirements for the project are available for review at our office in Anytown or at the ADOT, Phoenix AZ and are available at: <http://www.azdot.gov/projects/Projects>.

For assistance in obtaining bonds, lines of credit, and/or insurance for this project, please contact Steve at the noted phone number.

ABC Construction Company
 123 Main Street Anytown, AZ 85009

Contact: Steve
 Phone: 925-321-7654
 Fax: 925-321-7655
steve@Mail.com

5.04 PROVIDE INTERESTED DBES WITH PROJECT INFORMATION

Purpose: To provide interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist DBEs in responding to solicitations.

Action: Provide DBEs access to plans, specifications and other contract requirements in a timely manner prior to bid solicitation

Bidder's GFE Documentation:

- 1) Identify in writing and provide documentation of the following:
 - What types of project information did DBEs have access to prior to bid?
 - How were DBEs informed of the availability of project information?
 - When were they notified they had access to project information?
 - Provide copies of advertisements that may explain the above information,
(See *Section 5.03 Selecting Portions of Work* for an advertisement example that informs firms of where project plans are located)
 - Provide screen shots of steps in accessing project information online –screenshots must identify project numbers and/or descriptions

5.05 NEGOTIATE IN GOOD FAITH WITH INTERESTED DBES

Purpose: To ensure that negotiations with interested DBEs were made in good faith by providing evidence as to why additional agreements could not be reached for DBEs to perform work. It is the bidder's responsibility to make a portion of the work available to the DBE subcontractors and suppliers, and to select those portions of work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation.

Action: Provide evidence that good faith negotiations took place with interested DBEs.

Pro forma mailings to DBEs requesting bids are not alone sufficient to constitute good faith efforts.

A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. However, prime contractors are not required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. The bidder must submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract. The Department will review whether DBE prices were substantially higher and contact the DBEs listed on a contractor's solicitation to inquire as to whether they were contacted by the prime contractor. However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.

Bidder's GFE Documentation:

- 1) Identify DBEs that were considered for negotiations and include the following information:
 - a. Name of each business;
 - b. Telephone number of each business;
 - c. Contact person name negotiated with;
 - d. A description from the plans and specifications of work selected for subcontracting

- 2) Provide documentation of the following:
 - ALL** Quotes from DBEs
 - ALL** Quotes from non-DBEs that were considered alongside DBE firms

SECTION 5.05	NEGOTIATE IN GOOD FAITH	EXAMPLE
---------------------	--------------------------------	----------------

NEGOTIATIONS LOG EXAMPLE

ABC Construction Company
 Contact List
 Discovery House Facility

Negotiations Made By
 Rodger Smith

Only List DBEs

Name of Business	Address	Telephone Number	Contact Person	Task Description	Quotes Rec'd?	Considered for project?
Arrow Landscape	567 James St. Anytown, AZ	602-727-4915	Andrew Lang	Erosion Control & Seeding	Yes	No
Bear Valley Contractors	25 Teal St, Anytown, AZ	520-282-3404	Todd Lewinsky	Sidewalk, Curb & Gutter	No	No
B&C Fence Company	456 Apple Dr. Anytown, AZ	480-578-5026	Dorothy Smith	Fencing	Yes	Yes
Delta Cement Co.	10 Banks Ave. Anytown, AZ	623-297-5666	Bob Valentine	Material Supplier	Yes	No
Ebarra Landscape Services, Inc.	345 Ortiz Rd. Anytown, AZ	623-451-2105	Troy Torres	Erosion Control & Seeding	No	No
Flores Grading & Paving	789 Zion Dr. Anytown, AZ	602-383-2928	Ken Overton	Sidewalk, Curb & Gutter	Yes	Yes
Gateway Electric, Inc.	1001 Bakers Anytown, AZ	602-222-2873	Christina Lee	Traffic Signals	No	No
Hertz Air Conditioning Co., Inc.	219 Hightower Anytown, AZ	480-522-8727	Ellen Young	HVAC	No	No
Itachi Landscape	160 Crane St. Anytown, AZ	602-647-8955	Dan Kovaski	Erosion Control & Seeding	Yes	No
Jett Construction, Inc.	456 Anchor Rd. Anytown, AZ	602-364-8081	Rita Holt	Sidewalk, Curb & Gutter	Yes	No

QUOTE EXAMPLE

ABC Construction Company

925-321-7654

Owned By U.S. Perma, Inc.

925-321-7655 Fax

State License No. 439330 – Since 1962

Ceramic

Mosaic

Quarry

Marble

Granite

Pavers

Thin Brick

Date: February 4, 2013

Quote: 06190311

City: Martinez

QUOTE

Reference: DISCOVERY HOUSE FACILITY

Attention: Estimating

Base Bid: \$40,938.00

Addendum's: 1 only

Inclusions

Ceramic tile lobby and restrooms. Mortar floor at restrooms, cement backer board at walls and lobby floor (included at \$6,435.00). Waterproof membrane at restrooms floors.

Exclusions

Demo & Prep

This is a price quote confirmation for the aforementioned project as set forth in the inclusions section of this form. This quote is in accordance with plans, drawings, and specifications as presented to us, or as specified by your company. Shop drawings are not included unless specified above. All labor, materials, taxes, freight, equipment, etc., necessary to attain a complete product are included unless otherwise stated. This bid shall be valid for a period of sixty (60) days.

Thank you,

John Smith

123 Main Street
Anytown, CA 94553

5.06 HAVING SOUND REASON FOR REJECTING DBES

Purpose: To not reject DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities.

Action: The DBE contractor's standing within its industry, membership in specific groups, organizations or associations and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal.

Bidder's GFE Documentation:

- 1) Demonstrate that DBEs were rejected for sound reasons based on a thorough investigation of their capabilities;
- 2) Provide documentation of the following examples:
 - Past performance
 - Relevant business experience & stability
 - Safety record
 - Business ethic & moral integrity
 - Technical capacity
 - Other factors

5.07 ASSISTING INTERESTED DBES - BONDING, CREDIT, INSURANCE

Purpose: To assist interested DBEs in obtaining bonds, lines of credit, and insurance as required by ADOT/Subrecipient/LPA/Grantee or Bidder.

Action: Assist interested DBEs in such areas as obtaining bonding, lines of credit, or insurance and providing any technical assistance or information related to the plans, specification, and requirements of the project, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate.

Bidder's GFE Documentation:

- 1) If assistance was given, list each certified DBE to which such assistance was provided and include the following information:
 - a. Name of the DBE;
 - b. Date assistance was provided;
 - c. DBE contact person;
 - d. Telephone number of contact person with DBE; and
 - e. Explanation of assistance provided to the DBE (e.g., obtaining bonding, lines of credit, or insurance).

SECTION 5.07	BONDING, CREDIT, INSURANCE	EXAMPLE
--------------	----------------------------	---------

BONDS, LINES OF CREDIT AND INSURANCE

DBE firm:	Date:
Contact person:	Telephone #:
Assistance offered:	

DBE firm:	Date:
Contact person:	Telephone #:
Assistance offered:	

5.08 ASSISTING INTERESTED DBES – EQUIPMENT, SUPPLIES, MATERIALS, RELATED SERVICES

Purpose: To assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance and services.

Action: Assist interested DBEs in such areas as obtaining equipment, supplies, materials, or related assistance or services related to the plans, specification, and requirements of the project, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate.

Bidder’s GFE Documentation:

- 1) If assistance was given, list each certified DBE to which such assistance was provided and include the following information:
 - a. Name of the DBE;
 - b. Date assistance was provided;
 - c. DBE contact person;
 - d. Telephone number of contact person with DBE; and
 - e. Explanation of assistance provided to the DBE (e.g., obtaining equipment, supplies, materials, or related assistance or services).

SECTION 5.08	EQUIPMENT, SUPPLIES, MATERIALS, RELATED SERVICES	EXAMPLE
---------------------	---	----------------

EQUIPMENT, SUPPLIES, MATERIALS, RELATED ASSISTANCE OR SERVICES

DBE firm:	Date:
Contact person:	Telephone #:
Assistance offered:	

DBE firm:	Date:
Contact person:	Telephone #:
Assistance offered:	

5.09 MINORITY/WOMEN COMMUNITY ORGANIZATIONS

Purpose: To effectively use the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; other organizations as allowed for providing assistance in the recruitment and placement of DBEs.

Action:

- 1) Contact minority/women community organizations, DBE-related agencies recruitment/placement organizations, or other groups, for assistance in contacting, recruiting, and using DBE subcontractors, suppliers, manufacturers, and truckers. Contact should occur in a manner that allows interested DBEs to respond within **ten (10) calendar days** prior to bid opening.

Here are some example organizations that are available for assistance with DBE recruitment. This is not a complete list and bidders are expected to contact additional organizations to assist in finding DBEs.

Ricardo Carlo, President
Associated Minority Contractors of America
2630 S. 20th Place
Phoenix, AZ 85034
Office: (602) 495-0026 Fax: (602) 252-3749
Cell: (623) 521-8195
&
3941 E. 29th Street, Suite 605
Tucson, AZ 85711
Toll Free: (877) 619-0026
Email: amca@qwestoffice.net
Web: www.amcaaz.com

Kaaren-Lyn Morton, Business Consultant
Minority Business Development Agency
Business Center
255 E. Osborn Road, Suite 202
Phoenix, AZ 85012-2358
Office: (602) 248-0007, Ext. 216 Fax: (602) 279-8900
Cell: (480) 343-2799
Email: kaaren@phoenixmbdcenter.com
Web: www.phoenixmbdcenter.com
Operated by the Arizona Hispanic Chamber of Commerce Foundation

Business Engagement & Compliance Office
Arizona Department of Transportation
1801 W. Jefferson St. Ste. 101 (MD 154A)
Phoenix, AZ 85007
Office: (602) 712-7761 Fax: (602) 712-8429
Email: DBESupportiveServices@azdot.gov

The Arizona Unified Transportation Registration and Certification System (AZ UTRACS) online database (<http://www.azutracs.com/>) contains an inventory of DBEs. The database can be queried to provide a list of certified DBEs in specialty areas or discipline-specific.

2) Written requests for assistance must contain:

- a. Areas of work to be subcontracted;
- b. Bidder Name and contact person's name;
- c. Contact person's telephone number;
- d. Description of availability of plans, specifications, and other requirements for the project; and
- e. Bidder's policy concerning assistance to subcontractors (including suppliers, manufacturers, and truckers) in obtaining bonds, lines of credit, insurance, equipment, supplies, materials, related assistance and services.

Bidder's GFE Documentation:

- 1) Submit a copy of each request for assistance in recruiting DBEs.
- 2) Faxed copies must also include the fax transmittal confirmation slip showing the date and time of transmission.
- 3) Mailed letters must include copies of the metered envelopes or certified mail receipts.
- 4) Provide telephone number of each agency.
- 5) Provide contact person with the agency.
- 6) Provide response received from the agency (i.e., lists, Internet page, letters, emails, etc.).
- 7) Furnish any additional data to support demonstration of good faith efforts to contact, recruit, and utilize DBEs on this project.

SECTION 5.09	MINORITY/WOMEN COMMUNITY ORGANIZATIONS	EXAMPLE
--------------	--	---------

DBE QUOTE SOLICITATION REQUEST

(Enter: COMPANY NAME) is soliciting quotes from certified DBEs for the: (Enter: PROJECT LOCATION)
 (Example: Payson Winslow Highway SR 87 Limestone Wash Bridge)

Bidding Date: (Example: NOVEMBER 8, 2013)
 Project No: (Example: STP-BR-087-C(203)T)
 Tracs No: (Example: 000 YU YYU SS86101C)
 Bids due Contractor: (Example: NOVEMBER 4, 2013)

DBEs interested in bidding this project should contact:
 (Example: John Doe at 602 777 0000 or via email estimator@live.com)

(Enter: COMPANY NAME) is interested in subcontracting the following categories of work:

(Enter bid items for bid below)

- Concrete
- Seeding
- Paving
- Trucking
- Excavation
- Survey
- Traffic Control
- Guardrail
- Permanent Signs
- Excavation
- Lead Abatement
- Pavement Marking

***Please include any additional information that would assist efforts in DBE participation and a web-friendly company logo and Point of Contact.**

Bids documents can be found at: (Enter: COMPANY WEBSITE)

For questions regarding the ADOT DBE Supportive Services Program please contact us at DBEsupportiveservices@azdot.gov.

SECTION 6.0 APPENDIX A TO PART 26 – GUIDANCE CONCERNING GFEs

The following appendix from 49 CFR Part 26 is a guide to assist agencies in determining what a good faith effort is.

APPENDIX A TO PART 26 — GUIDANCE CONCERNING GOOD FAITH EFFORTS

Note: "YOU" means the Agency (ADOT) in the following section of this requirement.

- I. When, as a recipient, you establish a contract goal on a DOT-assisted contract for procuring construction, equipment, services, or any other purpose, a bidder must, in order to be responsible and/or responsive, make sufficient good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.
- II. In any situation in which you have established a contract goal, Part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, you have the responsibility to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made, based on the regulations and the guidance in this Appendix.

The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call. Determinations should not be made using quantitative formulas.

- III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.
- IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.
 - A. (1) Conducting market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project.

(2) The bidder should solicit this interest as early in the acquisition process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The bidder should

determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

- B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.
- C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract.
- D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

- E. (1) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.

(2) A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

- F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

- H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

- V. In determining whether a bidder has made good faith efforts, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts. As provided in §26.53(b)(2)(vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed on a contractor's solicitation to inquire as to whether they were contacted by the prime. Pro forma mailings to DBEs requesting bids are not alone sufficient to satisfy good faith efforts under the rule.

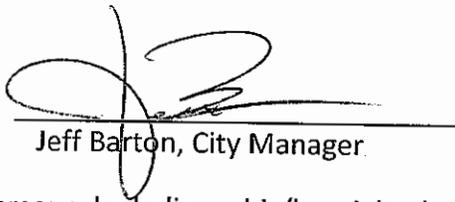
- VI. A promise to use DBEs after contract award is not considered to be responsive to the contract solicitation or to constitute good faith efforts.

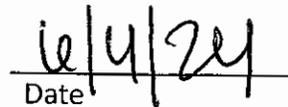
Note: Contacting BECO (602 712-7761) for assistance in identifying certified DBEs that can perform work on a contract is also considered a strong factor in making good faith efforts.



City of Phoenix Title VI Policy Statement

The City of Phoenix is committed to ensuring no person is discriminated against on the grounds of color, race or national origin and is in full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all City programs, services, and activities. Title VI requires that no person shall, based on race, color, or national origin, be excluded from participation in, be denied the benefits of or otherwise be subjected to discrimination under U.S. Department of Transportation Federal Highway Administration (FHWA) or other activity for which the City receives federal financial assistance.


Jeff Barton, City Manager


Date

Any person who believes his/her rights have been violated may file their concern within 180 days following the date of the alleged discriminatory occurrence with:

City of Phoenix Equal Opportunity Department
200 W. Washington Street, 15th Floor
Phoenix, AZ 85003
Phone: 602-262-7486 TTY: 602-534-1557

The complainant may also file a discrimination related complaint on an FHWA program or activity directly with ADOT or with the Federal Highway Administration by contacting the agencies at:

<p>ADOT Civil Rights Office Arizona Department of Transportation 206 S. 17th Avenue Mail Drop 155-A Phoenix, AZ 85007 Phone: 602.712.8946 Fax: 602.239.6257 Email: civilrightsoffice@azdot.gov</p>	<p>Federal Highway Administration U.S. Department of Transportation 1200 New Jersey Avenue, SE 8th Floor E81-105 Washington, DC 20590 Phone: 202-366-0693 Fax: 202-366-1599 Email: CivilRights.FHWA@dot.gov</p>
---	---

If you have any questions regarding this policy or any EEO matter or would like to request a copy of this document in alternate format, contact EOD at 602-262-7486/voice or TTY: 602-534-1557

City of Phoenix
Title VI/Non-Discrimination Assurances
DOT Order No. 1050.2A

The *City of Phoenix* (herein referred to as the "Recipient"), HEREBY AGREES THAT, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through *Federal Highway Administration* and *Arizona Department of Transportation*, is subject to and will comply with the following:

Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled *Non-discrimination In Federally-Assisted Programs Of The Department Of Transportation—Effectuation Of Title VI Of The Civil Rights Act Of 1964*);
- 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964)

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity," for which the Recipient receives Federal financial assistance from DOT, including the Federal Highway Administration.

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Non-discrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these non-discrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its *Federal Aid Highway Program*.

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23 (b) and 21.23 (e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard

to a "facility") operated, or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.

2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all *Federal Aid Highway Program* and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

"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 to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

3. The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.

4. The Recipient will insert the clauses of Appendix B of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.

5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.

6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.

7. That the Recipient will include the clauses set forth in Appendix C and Appendix D of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:

- a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
- b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.

8. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:

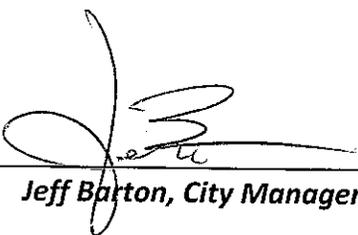
- a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
- b. the period during which the Recipient retains ownership or possession of the property.

9. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.

10. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, the **City of Phoenix** also agrees to comply (and require any sub-recipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing *Federal Highway Administration* or *Arizona Department of Transportation* access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by the *Federal Highway Administration* or *Arizona Department of Transportation*. You must keep records, reports, and submit the material for review upon request to *Federal Highway Administration*, *Arizona Department of Transportation*, or its designee in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

The **City of Phoenix** gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation under the *Federal Highway Administration* and *Arizona Department of Transportation*. This ASSURANCE is binding on Arizona, other recipients, sub-recipients, sub-grantees, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in the *Federal Aid Highway Program*. The person(s) signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

by 
Jeff Barton, City Manager

DATED 6/4/24

APPENDIX A

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 Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, *Federal Highway Administration or the Arizona Department of Transportation*, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination 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 Recipient, the *Federal Highway Administration or Arizona Department of Transportation* to be pertinent to ascertain compliance with such Acts, Regulations, 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 Recipient, the *Federal Highway Administration, or Arizona Department of Transportation*, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the *Federal Highway Administration or Arizona Department of Transportation*, may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient, the *Federal Highway Administration, or Arizona Department of Transportation* 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 Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

A

APPENDIX B

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the **City of Phoenix** will accept title to the lands and maintain the project constructed thereon in accordance with *Title 23*, United States Code the Regulations for the Administration of *Federal Aid for Highways*, and the policies and procedures prescribed by the *Arizona Department of Transportation, Federal Highway Administration* of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252;42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the **City of Phoenix** all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto **City of Phoenix** and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the **City of Phoenix**, its successors and assigns.

The **City of Phoenix**, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the **City of Phoenix** will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

APPENDIX C

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR 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 Assurance 7(a):

A. The (grantee, lessee, permittee, etc. 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. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (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 breach of any of the above Non-discrimination covenants, ***the City of Phoenix*** will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.*

C. With respect to a deed, in the event of breach of any of the above Non-discrimination 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*.

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX D

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 Assurance 7(b):

A. The (grantee, licensee, permittee, etc., 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, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.

B. With respect to (licenses, leases, permits, etc.), 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, permit, etc., as appropriate) and to enter or re-enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) 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.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX E

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

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

**CONSTRUCTION AND PROFESSIONAL SERVICES/DESIGN CONTRACTS
PROMPT PAY AND PAYMENT REPORTING PROVISIONS**

** FOR USE ON LPA FEDERAL AID PROJECTS **

(09/20/2016)

MEASUREMENTS AND PAYMENT:

Partial Payments:

If satisfactory progress is being made, the contractor will receive a payment based on the amount of work completed. Progress payments may be made by the LPA/ Subrecipient Procurement Office to the contractor on the basis of an approved estimate of the work performed during a preceding period of time. The progress payments shall be paid on or before 14 days after the estimate of the work is approved. The estimate of the work shall be deemed received by the LPA/Subrecipient Procurement Office on submission to the person designated by the LPA/Subrecipient Procurement Office for the submission, review or approval of the estimate of the work. The LPA/Subrecipient Procurement Office by mutual agreement may make progress payments on contracts of less than 90 days and shall make monthly progress payments on all other contracts. Payment to the contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under the contract may include payment for material and equipment.

An estimate of the work submitted shall be deemed approved and certified for payment after seven days from the date of submission unless before that time the LPA/Subrecipient Procurement Office or Designee prepares and issues a specific written finding setting forth those items in detail in the estimate of the work that are not approved for payment under the contract. The contractor shall work with the LPA/Subrecipient or the LPA/Subrecipient Designee to finalize monthly estimate. The progress payments shall be paid on or before 14 days after the estimate of the work is certified and approved in accordance with Arizona Revised Statutes Section 34-221.

The contractor shall pay to the contractor's subcontractors or material suppliers and each subcontractor shall pay to the subcontractor's subcontractor or material supplier, within seven days of receipt of each progress payment the respective amounts allowed the contractor or subcontractor on account of the work performed by the subcontractors, to the extent of each subcontractor's interest, except that no contract for construction services may materially alter the rights of any contractor, subcontractor or material supplier to receive prompt and timely payment.

A subcontractor may notify the LPA/Subrecipient Procurement Office in writing requesting that the subcontractor be notified by the Subrecipient Procurement Office in writing within five days from payment of each progress payment made to the contractor.

Subcontractor Payments:

(1) Retention:

If the prime contract does not provide for retention, the contractor and each subcontractor of any tier shall not withhold retention on any subcontract. If the prime contract provides for retention, the prime contractor and each subcontractor of any tier shall not retain a higher percentage than the LPA/Subrecipient may retain under the prime contract.

(2) No Set-offs Arising from Other Contracts:

If a subcontractor is performing work on multiple contracts for the same contractor or subcontractor of any tier, the contractor or subcontractor of any tier shall not withhold or reduce payment from its subcontractors on the contract because of disputes or claims on another contract.

(3) Partial Payment:

The contractor and each subcontractor of any tier shall make prompt partial payments to its subcontractors within seven days of receipt of payment from the LPA/Subrecipient Procurement Office. Notwithstanding any provision of Arizona Revised Statutes Section 34-221, the parties may not agree otherwise.

(4) Final Payment:

The contractor and each subcontractor of any tier shall make prompt final payment to each of its subcontractors. The contractor and each subcontractor of any tier shall pay all monies, including retention, due to its subcontractor within seven days of receipt of payment. Notwithstanding any provision of Arizona Revised Statutes Section 34-221, the parties may not agree otherwise.

(5) Payment Reporting:

For the purposes of this subsection "Reportable Contracts" means any subcontract, of any tier, DBE or non-DBE, by which work shall be performed on behalf of the contractor and any contract of any tier with a DBE material supplier.

The requirements of this subsection apply to all Reportable Contracts.

Payment Reporting for all Reportable Contracts shall be done through the LPA DBE System which can be accessed at AZ UTRACS on the Arizona Transportation Business Portal at www.azutracs.com. No later than fifteen calendar days after the preconstruction conference, the contractor shall log into the system and enter or verify the name, contact information, and subcontract amounts for Reportable Contracts on the project. As Reportable Contracts are approved over the course of the contract, the contractor shall enter the subcontractor information in the LPA DBE System. Reportable contracts information shall be entered into

the system no later than five calendar days after approval by the LPA/Subrecipient Procurement Office.

The contractor shall report on a monthly basis indicating the amounts actually paid and the dates of each payment under any Reportable Contract on the project. The contractor shall provide information for payments made on all Reportable Contracts during the previous month by the last day of the current month. In the event that no payments were made during a given month, the contractor shall identify that by entering a dollar value of zero. If the contractor does not pay the full amount of any invoice from a subcontractor, the contractor shall note that and provide the reasons in the comment section of the Monthly Payment Audit of the LPA DBE System.

In addition, the contractor shall require that all participants in any Reportable Contract electronically verify receipt of payment on the contract within 15 days of receipt of electronic payment notification and the contractor shall actively monitor the system to ensure that the verifications are input. The contractor shall proactively work to resolve any payment discrepancies in the system between payment amounts it reports and payment confirmation amounts reported by others.

The contractor shall ensure that all Reportable Contract payment activity is in the LPA DBE System. This includes all lower-tier Reportable Contracts.

The contractor shall maintain records for each payment explaining the amount requested by the subcontractor, and the amount actually paid pursuant to the request, which may include but are not limited to, estimates, invoices, pay requests, copies of checks or wire transfers, and lien waivers in support of the monthly payments in the system.

The contractor shall ensure that a copy of this Subsection is included in every Reportable Contract of every tier.

(a) Sanctions for Inadequate Reporting:

For each Reportable Contract on which the contractor fails to submit timely and complete payment information the LPA/Subrecipient Procurement Office will retain \$1,000.00 as liquidated damages, from the monies due to the contractor. Liquidated damages will be deducted each month for each Reportable Contract on which the contractor fails to submit payment information until the contractor provides the required information as described herein. After 90 consecutive days of non-reporting, the liquidated damages will increase to \$2,000.00 for each subsequent month, for each Reportable Contract on which the contractor fails to report until the information is provided. These liquidated damages shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

(6) Completion of Work:

A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished, documented, and accepted by the LPA/Subrecipient Procurement Office.

(7) Disputes:

If there is a discrepancy between what is reported by the contractor in the LPA DBE System and what the subcontractor indicates, an alert email will automatically be sent to the contractor. The email will be sent to the email address provided by the contractor in the LPA DBE System. It is the contractor's responsibility to ensure that the email address in the system is kept current.

The contractor shall provide a verifiable explanation of the discrepancy in the LPA DBE System as early as practicable but in no case later than seven days after the date of the alert email.

The LPA/Subrecipient will determine whether the contractor has acted in good faith concerning any such explanations. The LPA/Subrecipient and ADOT BECO reserves the right to request and receive documents from the contractor and all subcontractors of any tier, in order to determine whether prompt payment requirements are met.

The contractor shall implement and use the dispute resolution process outlined in the subcontract or by following the LPA/Subrecipient escalation process, to resolve payment disputes.

(8) Non-compliance:

Failure to make prompt partial payment, or prompt final payment including any retention, within the time frames established above, will result in remedies, as the LPA/Subrecipient Procurement Office deems appropriate, which may include but are not limited to:

- (a) Liquidated Damages: These liquidated damages shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.
 - (i) The LPA/Subrecipient Procurement Office will withhold two times the disputed dollar amount not paid to each subcontractor.
 - (ii) If full payment is made within 30 days of the LPA/Subrecipient Procurement Office's payment to the contractor, the amount withheld by the LPA/Subrecipient Procurement Office will be released.
 - (iii) If full payment is made after 30 days of the LPA/Subrecipient Procurement Office's payment to the contractor, the LPA/Subrecipient Procurement Office will release 75 percent of the funds withheld. The LPA/Subrecipient Procurement Office will retain 25 percent of the monies withheld as liquidated damages.
- (b) Additional Remedies. If the contractor fails to make prompt payment for three consecutive months, or any four months over the course of one

project, or if the contractor fails to make prompt payment on two or more projects within 24 months, the LPA/Subrecipient Procurement Office may, in addition, invoke the following remedies:

- (i) Withhold monthly progress payments until the issue is resolved and full payment has been made to all subcontractors, subject to the liquidated damages described in paragraph (a) above,
- (ii) Terminate the contract for default,
- (iii) Disqualify the contractor from future bidding, temporarily or permanently, depending on the number and severity of violations, if applicable.

In determining whether liquidated damages will be assessed, the extent of the liquidated damages, or additional remedies assessed, the LPA/Subrecipient will consider whether there have been other violations on this or other federal-aid contracts, whether the failure to make prompt payment was due to circumstances beyond the contractor's control, and other circumstances. The contractor may, within 15 calendar days of receipt of the decision of the LPA/Subrecipient, escalate the decision according to the contract's escalation process.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. 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.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *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 29 CFR 5.5, 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 1.e. 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 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 1.c. 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.

b. *Frequently recurring classifications.* (1) 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 1.c. of this section, provided that:

(i) 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;

(ii) The classification is used in the area by the construction industry; and

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

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) 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.

c. *Conformance.* (1) 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:

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

(ii) The classification is used in the area by the construction industry; and

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

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

(3) 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.

(4) 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.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) 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 1.c.(3) or (4) 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.

d. *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.

e. *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.

f. *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 (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency 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 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 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 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) 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;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements (1) 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.

(2) *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.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. 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.

(4) *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.

b. *Certified payroll requirements (1) 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 contracting

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.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) 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/WHD/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 contracting agency.

(3) *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:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) 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

(iii) 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.

(4) *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 3.b.(3) of this section.

(5) *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.

(6) *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](#).

(7) *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.

c. *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.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers*. The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, 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 contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *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.

(3) *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 contracting agency, the State DOT, the FHWA, 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 (29 CFR 5.5)

a. *Apprentices* (1) *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.

(2) *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.

(3) *Apprenticeship ratio*. The allowable ratio of apprentices to journeyworkers 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 4.a.(4) 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 4.a.(1) 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.

(4) *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.

b. *Equal employment opportunity*. The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

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 as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting 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. 29 CFR 5.5.

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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, 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. a. 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).

b. 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).

c. 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:

a. 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](#);

b. 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](#);

c. 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

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction 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 shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, 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. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 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 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* 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 section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency 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 section 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.

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

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) 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;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) 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 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 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:

a. 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;

b. 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;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or 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). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

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

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;

(2) Have not within a three-year period preceding this proposal 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) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with 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 (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. 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 clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with 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. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal 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.

b. 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 Federal 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.

2. 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 31 U.S.C. 1352. 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.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

REQUIRED CONTRACT PROVISIONS:

BIDDING REQUIREMENTS AND CONDITIONS:

Suspension from Bidding:

The City may suspend any person and any subsidiary or affiliate of any person from further bidding to the City and from being a subcontractor to a contractor or supplier or otherwise participating in the work:

- (A) If that person or any officer, director, employee or agent of that person is convicted, in this State, of any other jurisdiction, of a crime involving any of the following elements or actions:
 - (1) Entering into any contract, combination, conspiracy or other unlawful act in restraint of trade or commerce,
 - (2) Knowingly and willfully falsifying, concealing, or covering up a material fact by trick, scheme, or device,
 - (3) Making false, fictitious, or fraudulent statements or representations,
 - (4) Making or using a false writing or document knowing it to contain a false, fictitious, or fraudulent statement or entry.
 - (5) Misrepresentation or false statement on any application for bonding:
 - (6) Misrepresentation or false statement on any application for prequalification; or
- (B) If the City makes a finding of any of the above or finds that the contractor is not a Responsible Bidder or a Responsible Contractor.

Under this Subsection, a person means any individual, partnership, joint venture, corporation, association or other entity formed for the purpose of doing business as a contractor, subcontractor or supplier.

The signature of the bid proposal by a submitter constitutes the submitter's certification, under penalty of perjury under the laws of the United States, that the submitter, or any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor, or any position involving the administration of federal funds, has not been, or is not currently, under suspension, debarment, voluntary exclusion or been determined ineligible by any federal agency within the past three years. Signature of the bid proposal also certifies, under penalty of perjury under the laws of the United States, that the submitter does not have a proposed debarment pending. In addition, signature of the bid proposal certifies that the submitter has not been indicted, convicted, or had a civil judgment rendered against (it) by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

Any exceptions to the above paragraph shall be noted and fully described on a separate sheet and attached to the bid proposal.

Non-Collusion Certification:

Bidders making their submittal shall complete the "AFFIDAVIT BY CONTRACTOR CERTIFYING THAT THERE WAS NO COLLUSION IN BIDDING OF CONTRACT" form included within these project specifications. This form shall be executed by or on behalf of the person, firm, association of corporation submitting the bid, in the following form:

The bidder certifies that, pursuant to Subsection 112(c) of Title 23, United States Code, and Title 44, Chapter 10, Article 1 and Title 34, Chapter 2, Article 4 of the Arizona Revised Statutes, neither it nor anyone associated with the company, firm, corporation, or individual has, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of full competitive bidding in connection with the above referenced project.

SCOPE OF WORK:

Intent of Contract:

(A) COVENANT OF GOOD FAITH AND FAIR DEALING

This contract imposes an obligation of good faith and fair dealing in its performance and enforcement.

The Contractor and the City, with a positive commitment to honesty and integrity, agree to the following mutual duties:

- (1) Each will function within the laws and statutes applicable to their duties and responsibilities.
- (2) Each will assist in the other's performance.
- (3) Each will avoid hindering the other's performance.
- (4) Each will proceed to fulfill its obligations diligently.
- (5) Each will cooperate in the common endeavor of the contract.

(B) VOLUNTARY PARTNERING

The City of Phoenix Street Transportation Department intends to encourage the foundation of a cohesive partnership with the Contractor and its principal subcontractors and suppliers. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient contract performance and completion within budget, on schedule, and in accordance with plans and Specifications.

This partnership will be bilateral in makeup, and participation will be totally voluntary.

To implement this partner initiative prior to starting work, the Contractor's management personnel and the City's Engineering Supervisor will initiate a partnering development session. Persons required to be in attendance will be the City's Engineering Supervisor and key project personnel; the prime Contractor's on-site project manager and key project personnel; and principal subcontractor and supplier representatives.

Follow-up workshops may be held periodically throughout the duration of the contract as agreed by the Contractor and the City.

The establishment of a partnership charter on a project will not change the legal relationship of the parties to the contract, nor relieve either party from any of the terms of the contract.

(C) VALUE ENGINEERING PROPOSALS

Value Engineering proposals may be submitted to the Engineer for modifying the plans, specifications, or other requirements of the contract for the sole purpose of reducing the total cost of construction without impairing in any manner the essential functions or characteristics of the project, including but not limited to service life, economy of operations, ease of maintenance, desired appearance, or design and safety standards.

After execution of the contract, a value engineering proposal may be recommended by the Contractor. A proposal may include modifications to the plans or specifications, construction phasing or procedures, or other contract requirements.

The Engineer reserves the right to make alterations to the contract, in accordance with MAG Specification Section 104.2.1. The Engineer will notify the Contractor in writing of any alterations to the contract. Such alterations shall not be eligible for inclusion in any value engineering initiatives or joint proposals.

A savings resulting solely from the elimination or reduction in quantity of a bid item will not be considered as a value engineering

proposal. A savings resulting from the elimination or reduction in quantity of a bid item specified as part of a value engineering proposal will be considered.

The Contractor shall identify a value engineering proposal as such, and it shall contain, at a minimum, the following:

- (A) A description of both the existing contract requirements for performing the work and the proposed changes.
- (B) All engineering drawings and computations necessary for a thorough and expeditious evaluation.
- (C) An itemization of the existing contract requirements that must be changed if the proposal is adopted, and a recommendation as to the manner in which the change should be made.
- (D) A detailed estimate of the cost of performing the work under the existing contract and under the proposed changes, including the cost of implementing the changes.
- (E) The contract items affected by the proposed changes and any variations in quantities resulting from the changes, and any new items not listed in the bid schedule.
- (F) An objective estimate of any effects the proposal will have on collateral costs to the City, costs of related items, and costs of maintenance and operation.
- (G) A statement as to the effect that the proposal will have on the time for the completion of the project.
- (H) A statement in which the Engineer and Contractor jointly establish an acceptable period of time for evaluation of the proposal, and execution of a supplemental agreement. Any delays or extensions must be jointly approved by the Engineer and Contractor, or such proposal shall be considered rejected.
- (I) A statement as to any contract time extension or time related costs which will be requested by the Contractor as a condition for implementing the proposed changes.

The City will not be liable for any delay in executing a supplemental agreement, nor for any failure to accept a value engineering proposal.

The Engineer will notify the Contractor in writing regarding acceptance or rejection of a proposal. The City's decision will be final.

If the value engineering proposal is accepted in whole or in part, the necessary contract modifications and contract price adjustments will be made by the execution of a supplemental agreement which will specifically state that it is executed pursuant to the provisions of this subsection. The City will be the sole judge of the acceptability of a proposal, and of the estimated net savings in construction costs from the adoption of all or any part of the proposal.

The Contractor shall not perform any work described in the value engineering proposal until a supplemental agreement incorporating the proposal has been executed, or until the Contractor has been given written approval by the Engineer. If the supplemental agreement has not been executed, or the Contractor has not been given written approval on or before the date jointly determined above in paragraph (H), the proposal shall be deemed rejected.

The executed supplemental agreement shall incorporate the changes in the plans, specifications, or other requirements of the contract which are necessary to permit the proposal, or such part of it which has been accepted, to be put into effect, and shall include any conditions upon which the City's approval thereof is based. The executed supplemental agreement shall also extend the time for the completion of the contract if, the extension was requested by the Contractor as a condition for implementing the proposal, and such an extension has been deemed warranted by the City.

The executed supplemental agreement shall also establish the estimated net savings in the cost of performing the work attributable to the value engineering proposal. In determining the net savings, the Engineer reserves the right to disregard the contract bid prices if, in the Engineer's judgement, such prices do not represent a fair measure of the value of the work to be

performed or deleted. The executed supplemental agreement shall provide that the Contractor be paid 50 percent of the estimated net savings amount. Administrative or construction engineering costs by the City will not be included in the determination of the estimated net savings. Changes in overhead costs by the Contractor resulting from the proposal, including related time reductions or extensions, shall not be allowed.

The amount specified to be paid to the Contractor in the executed supplemental agreement shall constitute full compensation to the Contractor for the value engineering proposal and the performance of the work thereof pursuant to the said supplemental agreement.

Upon acceptance of a value engineering proposal, any restrictions imposed by the Contractor on its use or on disclosure of the information shall become void, and the City thereafter shall have the right to use all or any part of the proposal without obligation or compensation of any kind to the Contractor.

ALTERATION OF WORK:

Suspensions of Work Ordered by the Engineer:

If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within seven calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.

No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

CONTROL OF WORK:

Claims:

(A) Notice of Claim:

It is the purpose of this subsection that claims for additional compensation and any difference between the parties arising under and by virtue of the contract be brought to the attention of the Engineer at the earliest possible time and at the first responsible level to increase the possibility for such matters to be resolved or for appropriate action to be taken promptly. This section shall be construed to apply to all claims including, but not limited to, claims based on contract clauses as well as claims based on breach of contract or tort.

In the event any basis for additional compensation or time extension is perceived by the Contractor to have occurred, the Contractor shall give the Engineer immediate oral or written notice of such basis for additional compensation or time extension for the earliest possible decision, instruction, notice or action duly taken by the Engineer.

Should the Contractor disagree with any decision, order, instruction, notice, act or omission of the Engineer, the Contractor may submit a Notice of Claim to the Engineer. The Notice of Claim shall be submitted in writing within three working days after the Contractor has learned of the Engineer's action regarding the occurrence or event and before the Contractor begins the work on which he/she based the claim. For projects on which the voluntary partnering process is followed, and the Contractor elects to file

a claim, the Notice of Claim shall be submitted within three working days after the completion of the issue resolution process.

The Notice of Claim shall indicate, insofar as possible, the basis and the nature of the claim. If notification is not given, the Contractor hereby agrees to waive any claim for additional compensation. Within a 10-day period from the submission of the Notice of Claim, the Contractor shall submit in writing a projection of the Contractor's additional costs resulting from the alleged incident. Such costs shall include both present and future costs resulting from the alleged incident.

At the time the Contractor gives written notice of his/her claim, the Contractor shall immediately begin to keep and maintain complete and specific records to the extent possible, including but not limited to, cost records concerning details of the perceived claim.

The Contractor shall give the Engineer access to any such records and, when so requested, shall furnish the Engineer copies of claim documentation.

Unless otherwise agreed to in writing, the Contractor shall continue with and carry on the work and progress during the pendency of any claim, dispute, decision or determination by the Engineer, and any mediation or arbitration proceedings, and the City will continue to make progress payments to the Contractor in accordance with the contract documents.

(B) Submission of Claims:

As promptly as possible following the submission of a Notice of Claim in accordance with Subsection (A) of this section, but in no event later than 30 calendar days after all of the Contractor's costs have been incurred, the Contractor shall submit his/her claim to the Engineer concerning the matter so noticed.

The claim shall set forth clearly and in detail, for each item of additional compensation or extension of time requested, the reasons for the claim, references to applicable provisions of the specifications, the nature and the specific cost ascribed to each element of the claim or for each period of time involved, the basis used in ascribing each such element of cost or for each such period of time, and all other pertinent factual data.

The Contractor shall, insofar as it is possible to do so, promptly furnish any clarification and additional information or data deemed necessary and requested in writing by the Engineer.

(C) Decision on Claims:

The Engineer will make a written decision in relation to any claim presented by the Contractor within the following time frames:

- (1) For an adjustment in compensation, or other contractual dispute between the parties where the amount in controversy is \$200,000.00 or less, 30 calendar days from receipt of the Contractor's claim;
- (2) For an adjustment in compensation or other contractual dispute between the parties where the amount in controversy is more than \$200,000.00, 60 calendar days from receipt of the Contractor's claim.

Unless the Contractor and the Engineer otherwise stipulate in writing to a later time, if the Engineer does not make a decision or determination within the time frames prescribed in this subsection, the claim shall be deemed denied and the Contractor may proceed with the legal remedy prescribed herein.

The decision of the Engineer in relation to the Contractor's claim shall be final unless the Contractor commences arbitration or litigation as follows:

- (1) Where the amount in controversy is \$200,000.00 or less, the Contractor's sole legal remedy shall be arbitration.
- (2) Where the amount in controversy is more than \$200,000.00, the Contractor shall initiate litigation within twelve months after the cause of action accrues as prescribed in Section 12-821 of the Arizona Revised Statutes.

(D) Mediation:

If the Contractor is not satisfied with the decision of the Engineer, and prior to filing for arbitration or litigation, the Contractor may request a non-binding mediation by filing a request for mediation in writing with the Engineer. The Engineer will then arrange for a mutually agreeable mediator. Such request for mediation shall be made within 30 calendar days from actual receipt of the Engineer's decision as provided for in this section.

In connection with the mediation, each party shall bear its own costs, and any fees and expenses assessed by the mediator shall be borne equally by the parties.

(E) Arbitration of Claims and Disputes:

- (1) If the Contractor elects to invoke his/her right to arbitration, the Contractor shall file a Demand for Arbitration in writing with the American Arbitration Association, United States Arbitration and Mediation of Arizona, or any equivalent arbitration service, and serve a copy thereof upon the Engineer. Such Demand for Arbitration shall be made by claimant within 30 calendar days measured from actual receipt of the Engineer's decision unless a mediation process is already underway, in which case the Demand for Arbitration shall be made within 30 days of the termination of the mediation process. The scope of the arbitration proceeding shall be restricted and limited to the matters presented to the Engineer upon which the decision or determination was made and shall include no other matters. All arbitration of claims shall be conducted in Phoenix, Arizona in accordance with the rules of the arbitration service hearing the dispute.
- (2) The decision or award of the arbitrator shall be supported by substantial evidence and, in writing, contain the basis for the decision or award and findings of fact. The decision or award by the arbitrator when made shall be final and non-appealable except as provided in Section 12-1512, Arizona Revised Statutes. Both the Contractor and the Engineer shall be bound by the Arbitration Award for all purposes and judgment may be entered upon it in accordance with applicable law in the Superior Court of Arizona in and for the County of Maricopa.
- (3) For the purposes of this section, a claim for adjustment in compensation shall mean an aggregate of operative facts that give rise to the rights that the Contractor seeks to enforce. That is to say, a claim under this section is defined as the event, transaction or set of facts that give rise to a claim for compensation, costs or expenses or damages which do not exceed \$200,000.00 in amount.

In making a determination whether the amount in controversy is \$200,000.00 or less, the parties shall not consider, quantify or take into account any requested extensions of contract time, or the release or remission of liquidated damages previously assessed.

- (4) Any contractor having a claim, adjustment or dispute for an amount in excess of \$200,000.00 may waive or abandon the dollar amount of any such claim in excess of \$200,000.00 so as to bring the claim, adjustment or dispute within the scope and coverage of this section, provided that the amount allowed to any such contractor by the arbitration award shall not exceed \$200,000.00. Various damages claimed by the Contractor for a single claim may not be divided into separate proceedings to create claims within the \$200,000.00 limit.
- (5) The claim shall be submitted to a single arbitrator who shall be selected by the parties from a list of arbitrators furnished by the arbitration service. Each party shall alternately strike names from the list until only one name remains. The person whose name thus remains on the list of arbitrators is their first choice but if that person is not available to serve, the two persons whose names were last stricken are acceptable, with the one whose name was last stricken being the first alternate.
- (6) Unless agreed to otherwise, the parties shall select the arbitrator within ten calendar days after each has received a copy of the list of arbitrators.
- (7) Each party to the arbitration shall bear its own costs and any other cost and fees assessed shall be divided equally between the parties to the arbitration.

CONTROL OF MATERIAL:

(A) Source of Supply and Quality Requirements:

Whenever water is required on a project, as part of either a process or a product, it shall be free of contaminants which, in the judgment of the Engineer, constitute a health hazard to those individuals employed on the project and to the general public.

Untreated effluent shall not be utilized in any aspect of the work.

(B) Certificates:

1. General:

The Contractor shall submit to the Engineer an original or copy of either a Certificate of Compliance or a Certificate of Analysis, as required, prior to the use of any materials or manufactured assemblies for which these specifications or the special provisions require that such a certificate be furnished.

The Engineer may permit the use of certain materials or manufactured assemblies prior to, or without, sampling and testing if accompanied by a Certificate of Compliance or Certificate of Analysis, as herein specified. Materials or manufactured assemblies for which a certificate is furnished may be sampled and tested at any time, and, if found not in conformity with the requirements of the plans and the specifications, will be subject to rejection, whether in place or not.

Certificates shall comply with the requirements specified herein.

2. Certificate of Compliance:

A Certificate of Compliance shall be submitted on the manufacturer's or suppliers' official letterhead, and contain the following information:

- (1) The name, address and phone number of the manufacturer or supplier of the material.
- (2) A description of the material supplied.
- (3) Quantity of material represented by the certificate.
- (4) Means of material identification, such as label, lot number, or marking.
- (5) Statement that the material complies in all respects with the requirements of the cited specifications. Certificates shall state compliance to the specific cited specification, such as AASHTO M-194, ASTM A-588; or specific table or section of the MAG Uniform Standard Specifications, City of Phoenix Supplement to MAG, or Special Provisions. Certificates may cite all, if applicable.
- (6) A statement that the individual identified in item seven below has the legal authority to bind the manufacturer or the supplier of the material.
- (7) The name, title, and signature the responsible individual. The date of the signature shall also be given.

Each of the first six items specified above shall be completed prior to the signing as defined in item seven. No certificate will be accepted that has been altered, added to, or changed in any way after the authorized signature has been affixed to the original certificate. However, notations of a clarifying nature, such as project number, contractor, or quantity shipped are acceptable, provided the basic requirements of the certificate are not affected.

A copy or facsimile reproduction (FAX) will be acceptable; however, the original certificate shall be made available upon request.

3. Certificate of Analysis:

A Certificate of Analysis shall include all the information required in a Certificate of Compliance and, in addition, shall include the results of all tests required by the specifications.

(C) Domestic Materials:

Buy America

Steel and iron materials and products used on all projects shall comply with the current "Buy America" requirements of 23 CFR 635.410.

All manufacturing processes to produce all steel and iron products used on this project shall occur in the United States. Raw materials used in manufacturing the steel and iron products may be foreign or domestic. Steel or iron not meeting these requirements may be used in products on this project provided that the invoiced cost to the Contractor for such steel products incorporated into the work does not exceed either one-tenth of one percent of the total (final) contract cost or \$2,500, whichever is greater.

Any process which involves the application of a coating to iron or steel shall occur in the United States. These processes include epoxy coating, galvanizing, painting, or any other coating which protects or enhances the value of covered material.

The requirements specified herein shall only apply to steel and iron products permanently incorporated into the project. "Buy America" provisions do not apply to temporary steel items, such as sheet piling, temporary bridges, steel scaffolding and falsework, or to materials which remain in place at the contractor's convenience.

Certificates of Compliance, conforming to the requirements of these Specifications, will accompany each shipment of material that includes steel or iron products and will be submitted to the Engineer prior to its use. The Certificates of Compliance must state that the steel or iron products utilized on the project meets the requirements specified herein and shall also certify that all manufacturing processes to produce steel or iron products, and any application of a coating to iron or steel, occurred in the United States.

Convict-produced materials may not be used unless the materials were produced prior to July 1, 1991 at a prison facility specifically producing convict-made materials for Federal-aid construction projects.

(D) Procurement of Recovered Materials:

Contractor and subcontractors 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 C.F.R. Part 247. In the performance of this Contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 C.F.R. 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.

Contractor and Subcontractors will be responsible for reviewing EPA's website, including the Comprehensive Procurement Guidelines for Construction Products, for the most updated information under 40 C.F.R Part 247. Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the Contractor can demonstrate the item is:

1. Not reasonably available within a timeframe providing for compliance with the Contract performance schedule;
2. Fails to meet reasonable contract performance requirements; or
3. Is only available at an unreasonable price.

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

(A) Sanitary, Health, and Safety Provisions:

Occupational Safety and Health Standards shall apply at all times. The Contractor shall have, in accordance with OSHA requirements, Material Safety Data Sheets (MSDS) available for all applicable materials stored or utilized on the project. Should the Contractor fail to follow OSHA regulations, the Engineer may suspend the work by written notice until compliance has been achieved. Any such failure to comply with OSHA regulations shall constitute waiver of any right to claim for such suspended work. If regulations are in conflict, the more strict regulation will apply.

(B) Public Convenience and Safety:

The Contractor shall abide by all OSHA 29 CFR Part 1926 and 29 CFR Part 1910 Regulations, as well as all applicable standards of the Environmental Protection Agency (EPA), the Arizona Department of Environmental Quality (ADEQ), and the Mine Safety and Health Administration (MSHA). The Contractor shall maintain a copy of the specified OSHA Standards on the construction site at all times.

The Contractor shall submit a Safety Plan at the preconstruction conference. The Safety Plan shall specify the procedures the Contractor will implement to satisfy OSHA and any state occupational safety guidelines related to the worker as well as the public in the construction of excavations, structures and confined air spaces along with all other activities involved in the project. The Engineer will review the Safety Plan within 10 working days and identify any additional elements of the project to be included. The Contractor shall then modify the Safety Plan, if necessary, for re- submittal to the Engineer within 5 working days. The Contractor shall not commence work until the Safety Plan has been approved, unless authorized by the Engineer.

The safety plan shall include a list of emergency procedures, phone numbers, and methods of communication for medical facilities, Police, Fire Department, and other emergency services which may become necessary. The Contractor shall be responsible for providing First Aid treatment and medical supplies on the project site, in accordance with OSHA 29 CFR Part 1910, and for producing and maintaining records of any injury-related incidents. The Safety Plan shall include the requirement that all workers must wear OSHA approved hard hats, reflective safety vests or other approved high visibility warning garments, work shoes, and, when appropriate, safety glasses while in construction areas. The Engineer and Project Superintendent shall each ensure that their visitors comply with the above requirements as appropriate.

The Contractor shall designate a competent person as Safety Supervisor to be responsible for implementation of the Safety Plan throughout the contract period. The competent person shall be capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and have authority to take prompt corrective measures to eliminate them. The Safety Supervisor shall also conduct safety meetings, oversee and maintain safe job-site conditions, and ensure that emergency procedures, phone numbers, and all applicable OSHA notification posters are conspicuously placed in all work areas.

The Safety Supervisor shall maintain records demonstrating that all workers have sufficient experience to operate their equipment, and have been instructed in the proper operation of the equipment. The Safety Supervisor shall furnish evidence that crane operators have been instructed in accordance with the requirements of OSHA 29 CFR Part 1926.550 Subpart N, and 1926.955 Subpart V.

(C) Damage by Storm, Flood, or Earthquake:

Damage by Storm, Flood, or Earthquake: Attention is directed to MAG Section 107.10, "Contractor's Responsibility for Work". In the event damage to the work is caused by a storm, flood, or earthquake which constitutes an "Occurrence," as hereinafter defined, the provisions of this Section shall be applicable and the Contractor may apply in writing to the Engineer for the City to pay or participate in the cost of repairing damage to the work from such cause or, in lieu thereof, and at the sole discretion of the Department/City, terminate the contract and relieve the Contractor of further obligation to perform the work, subject to the following:

1. Occurrence:

"Occurrence" shall include tornadoes; earthquakes in excess of a magnitude of 3.5 on the Richter Scale; and storms and floods for which the Governor has proclaimed a state of emergency, when the damaged work is located within the territorial limits to which such proclamation is applicable; or which were a catastrophic, unusual, sudden, and unforeseeable manifestation of the forces of nature, the effect of which could not have been prevented or minimized by reasonable human foresight and effort.

2. Application by Contractor:

The Contractor shall immediately begin performing emergency work necessary to provide for the safety and passage of public traffic, and such other emergency work necessary to mitigate damages to the facilities. The Contractor's written request for the City to pay or to participate in the cost of rebuilding, repairing, restoring or otherwise remedying the damage to the work caused by the occurrence shall be submitted to the Engineer. The repair work may begin prior to authorization by the Engineer, but the Contractor shall keep accurate costs of all such work performed.

3. Repair Work:

Repair of damaged work under the provisions of this subsection shall be pursuant to a supplemental agreement issued hereunder and specifying the repair work to be performed on the damaged facility. Such repair work shall consist of restoring the in-place construction (for the purposes of this subsection erected falsework and formwork shall be considered in-place construction) to the same state of completion to which such work had advanced prior to the Occurrence. Emergency work which the Engineer determines would have been part of the repair work if it had not previously been performed, will be considered to be part of said repair work. The City reserves the right to make changes in the plans and specifications applicable to the portions of the work to be repaired, and if such changes will increase the cost of repairing the damage over the Engineer's estimate of the cost of repair without the changes, the Contractor will be paid for such increased costs in accordance with Subsection 4 below.

Nothing in this section shall be construed to relieve the Contractor of full responsibility for the risk or injury, loss or damage to materials not yet incorporated in the work and to materials, tools, and equipment (except erected falsework and formwork) used to perform the work, nor to relieve the Contractor of his liability. The City will be responsible for any portion of the work accepted by the Engineer in accordance with MAG Section 105.15, and the Supplementary Conditions section, "MAG SUBSECTION 105.15(B) FINAL ACCEPTANCE" contained herein.

4. Determination of Costs:

Unless otherwise agreed between the Engineer and the Contractor, the cost of the work performed pursuant to this Section will be determined in accordance with an approved contract change order. The cost of emergency work, which the Engineer determines would have been part of the repair work if it had not previously been performed will be determined in the same manner as the authorized repair work. The cost of superintendence and other documented direct project costs associated with recovering the site, including idled equipment, remobilization costs and project office overhead shall be included in the cost of emergency and repair work. No payment shall be made for home office overhead.

5. Payment for Repair Work:

The City will pay the cost of the repair work as determined in Subsection 4.

6. Termination of Contract:

If the City elects to terminate the contract, the termination and the determination of the total compensation payable to the Contractor shall be governed by the provisions of MAG Section 108.11- Termination of Contract.

PROVIDE ON-THE-JOB TRAINING:

The Contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification

involved.

The number of trainees to be trained under this project shall be at least 0, and the required number of training hours shall be 0; however, the Contractor shall make every possible effort to provide additional trainees with training and shall see that all trainees are afforded every opportunity to participate in as much training as is practically possible to provide. Due to turnover and attrition of trainees in any single trainee slot, it is expected that continuous trainee replacements may be necessary during the contract work period.

In the event that a Contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also insure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the City for approval, the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The Contractor shall satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records shall document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the City and the Federal Highway Administration. The City and the Federal Highway Administration will approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, Apprenticeship programs registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Bureau of Apprenticeship and Training will also be considered acceptable provided they are being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Specifically, union apprenticeship programs, Associated Builders and Contractor's apprenticeship program and Associated General Contractor's Arizona Training program may be used. Additionally, in-house training programs are approved on a case-by-case basis. Approval or acceptance of a training program shall be obtained from the City prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Federal Highway Administration. Some off site training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training

persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for off-site training indicated above may only be made to the Contractor where he contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the off site training period.

No payment will be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. However, when such training opportunities are suspended or interrupted under the contract which the trainee was designated, the Contractor may continue training under other contracts regardless of their funding, except that no reimbursement for such training shall be made on non-federal aid contracts, under this training special provision. It is not required that all trainees be on board for the entire length of the contract. A Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent of the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program will apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The Contractor shall provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

The Contractor shall submit a weekly training report to the Engineer. The report shall be prepared on forms obtained from the City of Phoenix Equal Opportunity Department, Business Relations Division, 200 W. Washington Street, 15th Floor, Phoenix, AZ 85003.

At the preconstruction conference, the Contractor shall submit a schedule which will indicate each trainee's name, social security number, sex, race/ethnicity, the program in which the trainee is enrolled, the approximate number of hours each trainee will be trained in each phase of the work, the crafts to which the trainees belong and the estimated period of time that they will be employed as trainees. A supplemental schedule shall be submitted to the Engineer when a revision in the original schedule is necessary. At the time each trainee is scheduled to begin work, the Contractor shall submit to the Engineer each trainee's name, social security number, sex, and race/ethnicity. The Contractor must also submit proof that the trainee is enrolled in an approved training program.

At the conclusion of the project or at the end of each calendar year for multi-year projects, the Contractor must submit to the City of Phoenix Equal Opportunity Department (via the Engineer), the same information described hereinbefore for each trainee that worked on the project. Additionally, the Contractor must indicate if the trainee graduated from the program, was terminated due to cause, or was transferred to another project to continue his/her training.

If, at the preconstruction conference, the Contractor does not provide a schedule containing the specified information, the Engineer will notify the Contractor of the infraction. Failure to provide the schedule within 15 calendar days from the date of notification shall be considered as willful non-compliance. The Engineer will cause to be withheld from the Contractor's monthly payments additional retainage in the amounts specified below. The amount withheld from the monthly payment shall be held until an acceptable schedule or supplemental schedule has been submitted.

The Engineer will monitor the use of trainees based on the Contractor's schedule, supplemental schedules, and weekly training report. If the use of trainees is not in conformance with the schedule or supplemental information, the Engineer will cause to be

withheld from the Contractor's monthly payments additional retainage in the amounts specified below. Conformance with the schedule will be considered acceptable when the cumulative number of trainee hours earned to date under the bid item, PROVIDE ON THE JOB TRAINING is at least 90 percent of that shown on the schedule, for the work performed to date.

ADDITIONAL RETAINAGE

First and Second monthly payments following infraction: \$1,000.00 each month

Third monthly payment and thereafter: \$5,000.00 each month

The amount withheld from the monthly payment shall be held until an acceptable schedule or supplemental schedule has been submitted and until conformance with the schedule has been determined.

If, at the completion of the contract, the City is holding additional retainage in accordance with this specification, the retainage will become the property of the City, not as penalty but as liquidated damages.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION:

The Contractor shall complete the "Information Furnished Pursuant to the NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)" form (copy included in this Federal Requirement section of these Special Provisions), and submit it to the Engineer at the pre-construction meeting. This form will be filed with the U.S. Department of Labor by the City of Phoenix.

NOTICE OF REQUIREMENT FOR CARGO ACT OF 1954:

The Federal Highway Administration (FHWA) in partnership with the Federal Maritime Administration has mandated the implementation of 46 CFR 381 making the requirements of the Cargo Preference Act (CPA) applicable to the Federal Aid Highway Program.

The requirements apply to items transported by ocean vessel.

The requirements of 46 CFR 381 apply to materials or equipment acquired for a specific federal-aid highway project. In general, the requirements are not applicable to goods or materials that come from inventories independent of FHWA-funded contracts.

Information related to the CPA is presented in "Cargo Preference Requirements – Questions and Answers" available from the FHWA at <https://www.fhwa.dot.gov/construction/cgit/cargo/ga.cfm>.

The Contractor shall comply with the requirements of the Cargo Preference Act 46 CFR 381.7(a)-(b). By executing a construction contract for this project, the Contractor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in the paragraph above to both the Engineer and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
3. To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

**INFORMATION FURNISHED PURSUANT TO THE NOTICE OF
REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246)
Set Forth in Paragraph 3 in Federal Register,
Vol. 43, No. 68**

CITY OF PHOENIX PROJECT NO: ST89330233
FEDERAL AID NO.: PHX-0(359)D
ADOT TRACS NO.: MA-PHX-T0225 01C
PROJECT DESCRIPTION: FY2020 FEDERAL TAP HAWK INSTALLATION
LOCATION: Buckeye Rd/16th Ave, Colter St/7th Ave, Osborn Rd/13th Ave, Peoria Ave/17th Ave, Thomas Rd/Dayton St, Virginia Ave/16th St.

Contractor Identification Number (as used on U.S. Treasury Department Form 941): _____

and Address of Contractor: _____

Telephone Number: _____

Amount of Contract: _____

Estimated Starting Date: _____

Estimated Completion Date: _____

Geographical Area: State of Arizona

(County)

(City)

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
EXECUTIVE ORDER 11246, July 1, 1978 (Revised November 3, 1980)

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer Identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

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

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

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

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

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

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

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area.

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

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

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

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

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

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken

with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason hereof, 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 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 obligation under these specifications are being carried out.

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

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

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

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation

which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

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

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

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

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

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

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form;

however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

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

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246)**

JULY 1, 1978 (Revised November 3, 1980)

(Revised April 15, 1981)

1. The bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

	<u>Minority</u>	<u>Female</u>
Tucson and balance of Pima County	24.1	6.9
Cochise, Graham, Greenlee and Santa Cruz Counties	27.0	6.9
Phoenix and balance of Maricopa County	15.8	6.9
Apache, Coconino, Gila, Mohave, Navajo, Pinal, Yavapai and Yuma Counties	19.6	6.9

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in all areas where he has Federal or federally assisted work.

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

FEDERAL-AID PROPOSAL NOTICES

NOTICES TO PROSPECTIVE FEDERAL-AID CONSTRUCTION CONTRACTORS

1. CERTIFICATION OF NONSEGREGATED FACILITIES

- a. A certification of Nonsegregated Facilities, as required by the May 9, 1967, Order of the Secretary of Labor (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities (is included in the proposal and must be submitted prior to the award of a Federal-aid highway construction contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause).
- b. Bidders are cautioned as follows: By signing this bid, the bidder will be deemed to have signed and agreed to the provisions of the "Certification of Nonsegregated Facilities" in this proposal. This certification provides that the bidder does not maintain or provide for his employee facilities which are segregated on a basis of race, creed, color, or national origin, whether such facilities are segregated by directive or on a de facto basis. The certification also provides that the bidder will not maintain such segregated facilities.
- c. Bidders receiving Federal-aid highway 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 construction contracts and material suppliers where the subcontracts or materials supply agreements exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity clause.

2. NOTICE TO PROSPECTIVE SUBCONTRACTORS AND MATERIAL SUPPLIERS OF REQUIREMENT FOR CERTIFICATION OF NONSEGREGATED FACILITIES

- a. A Certification of Nonsegregated Facilities as required by the May 9, 1967, Order of the Secretary of Labor (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, which is included in the proposal, or attached hereto, must be submitted by each subcontractor and material supplier prior to the award of the subcontract or consummation of a material supply agreement if such subcontract or agreement exceeds \$10,000 and is not exempt from the provisions of the Equal Opportunity clauses.

- b. Subcontractors and material suppliers are cautioned as follows: By signing the subcontract or entering into a material supply agreement, the subcontractor or material supplier will be deemed to have signed and agreed to the provisions of the "Certification of Nonsegregated Facilities" in the subcontract or material supply agreement. This certification provides that the subcontractor or material supplier does not maintain or provide for his employees facilities which are segregated on the basis of race, creed, color, or national origin, whether such facilities are segregated by directive or on a de facto basis. The certification also provides that the subcontractor or material supplier will not maintain such segregated facilities.
- c. Subcontractors or material suppliers receiving subcontract awards or material supply agreements 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 construction contracts and materials suppliers where the subcontracts or material supply agreements exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity clause.

3. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

By signing this bid, the bidder will be deemed to have stipulated as follows:

- a. That any facility to be utilized in the performance of this contract, unless such contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1957 et seq., as amended by Pub. L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR, Part 15), is not listed on the U.S. Environmental Protection 40 CFR 15.20.
- b. That the State highway department shall be promptly notified prior to contract award of the receipt by the bidder of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

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



Displaying title 29, up to date as of 7/29/2024. Title 29 was last amended 7/19/2024. [?](#)

Title 29 — Labor

Subtitle A — Office of the Secretary of Labor

ENHANCED CONTENT - TABLE OF CONTENTS

- 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 – 3.11
- § 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]

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



Displaying title 29, up to date as of 7/29/2024. Title 29 was last amended 7/19/2024. [?](#)

Title 29 — Labor

Subtitle A — Office of the Secretary of Labor

ENHANCED CONTENT - TABLE OF CONTENTS

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)	5.1 – 5.40
Subpart A	Davis-Bacon and Related Acts Provisions and Procedures	5.1 – 5.18
§ 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.	
§ 5.13	Rulings and interpretations.	
§ 5.14	Variations, tolerances, and exemptions from parts 1 and 3 of this subtitle and this part.	
§ 5.15	Limitations, variations, tolerances, and exemptions under the Contract Work Hours and Safety Standards Act.	
§ 5.16	[Reserved]	
§ 5.17	[Reserved]	
§ 5.18	Remedies for retaliation.	
Subpart B	Interpretation of the Fringe Benefits Provisions of the Davis-Bacon Act	5.20 – 5.33
§ 5.20	Scope and significance of this subpart.	
§ 5.21	[Reserved]	
§ 5.22	Effect of the Davis-Bacon fringe benefits provisions.	
§ 5.23	The statutory provisions.	
§ 5.24	The basic hourly rate of pay.	
§ 5.25	Rate of contribution or cost for fringe benefits.	
§ 5.26	“*** contribution irrevocably made *** to a trustee or to a third person”.	
§ 5.27	“*** fund, plan, or program”.	
§ 5.28	Unfunded plans.	
§ 5.29	Specific fringe benefits.	
§ 5.30	Types of wage determinations.	
§ 5.31	Meeting wage determination obligations.	
§ 5.32	Overtime payments.	
§ 5.33	Administrative expenses of a contractor or subcontractor.	
Subpart C	Severability	5.40
§ 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

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.

CROSS REFERENCE

Link to an amendment published at 88 FR 57734, Aug. 23, 2023.

- (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 procurement 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/WHD/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 journeyworkers 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 journeyworkers 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 \$32 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 procurement 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]

§ 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 \$32 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]

§ 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]

⦿ Subpart C—Severability

Source: 88 FR 57747, Aug. 23, 2023, unless otherwise noted.

⦿ § 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.

"General Decision Number: AZ20240008 08/30/2024

Superseded General Decision Number: AZ20230008

State: Arizona

Construction Type: Highway

Counties: Coconino, Maricopa, Mohave, Pima, Pinal, Yavapai and Yuma Counties 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 \$17.20 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 2024.
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 \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

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	01/05/2024
1	01/19/2024
2	08/30/2024

CARP0408-005 07/01/2023

	Rates	Fringes
CARPENTER (Including Cement Form Work).....	\$ 34.50	14.17

ENGI0428-001 06/01/2023

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Group 1.....	\$ 31.69	13.52
Group 2.....	\$ 34.96	13.52
Group 3.....	\$ 36.04	13.52
Group 4.....	\$ 37.07	13.52

POWER EQUIPMENT OPERATORS CLASSIFICATIONS:

GROUP 1: A-frame boom truck, air compressor, Beltcrete, boring bridge and texture, brakeman, concrete mixer (skip type), conductor, conveyor, cross timing and pipe float, curing machine, dinky (under 20 tons), elevator hoist (Husky and similar), firemen, forklift, generator (all), handler, highline cableway signalman, hydrographic mulcher, joint inserter, jumbo finishing machine, Kolman belt loader, machine conveyor, multiple power concrete saw, pavement breaker, power grizzly, pressure grout machine, pump, self-propelled chip spreading machine, slurry seal machine (Moto paver driver), small self-propelled compactor (with blade-backfill, ditch operation), straw blower, tractor (wheel type), tripper, tugger (single drum), welding machine, winch truck

GROUP 2:

ALL COUNTIES INCLUDING MARICOPA: Aggregate Plant, Asphalt plant Mixer, Bee Gee, Boring Machine, Concrete Pump, Concrete Mechanical Tamping-Spreading Finishing Machine, Concrete Batch Plant, Concrete Mixer (paving & mobile), Elevating Grader (except as otherwise classified), Field Equipment Serviceman, Locomotive Engineer (including Dinky 20 tons & over), Moto-Paver, Oiler-Driver, Operating Engineer Rigger, Power Jumbo Form Setter, Road Oil Mixing Machine, Self-Propelled Compactor (with blade-grade operation), Slip Form (power driven lifting device for concrete forms), Soil Cement Road Mixing Machine, Pipe-Wrapping & Cleaning Machine (stationary or traveling), Surface Heater & Planer, Trenching Machine, Tugger (2 or more drums).

MARICOPA COUNTY ONLY: Backhoe < 1 cu yd, Motor Grader (rough), Scraper (pneumatic tired), Roller (all types asphalt), Screed, Skip Loader (all types 3<6 cu yd),

Tractor (dozer, pusher-all).

GROUP 3:

ALL COUNTIES INCLUDING MARICOPA: Auto Grade Machine, Barge, Boring Machine (including Mole, Badger & similar type directional/horizontal), Crane (crawler & pneumatic 15>100 tons), Crawler type Tractor with boom attachment & slope bar, Derrick, Gradall, Heavy Duty Mechanic-Welder, Helicopter Hoist or Pilot, Highline Cableway, Mechanical Hoist, Mucking Machine, Overhead Crane, Pile Driver Engineer (portable, stationary or skid), Power Driven Ditch Lining or Ditch Trimming Machine, Remote Control Earth Moving Machine, Slip Form Paving Machine (including Gunnert, Zimmerman & similar types), Tower Crane or similar type.

MARICOPA COUNTY ONLY: Backhoe<10 cu yd, Clamshell < 10 cu yd, Concrete Pump (truck mounted with boom only), Dragline <10 cu yd, Grade Checker, Motor Grader (finish-any type power blade), Shovel < 10 cu yd.

GROUP 4: Backhoe 10 cu yd and over, Clamshell 10 cu yd and over, Crane (pneumatic or crawler 100 tons & over), Dragline 10 cu yd and over, Shovel 10 cu yd and over.

All Operators, Oilers, and Motor Crane Drivers on equipment with Booms, except concrete pumping truck booms, including Jibs, shall receive \$0.01 per hour per foot over 80 ft in addition to regular rate of pay

Premium pay for performing hazardous waste removal \$0.50 per hour over base rate.

* IRON0075-004 08/01/2024

COCONINO, MARICOPA, MOHAVE, YAVAPAI & YUMA COUNTIES

	Rates	Fringes
Ironworker, Rebar.....	\$ 33.00	18.91
Zone 1: 0 to 50 miles from City Hall in Phoenix or Tucson		
Zone 2: 050 to 100 miles - Add \$4.00		
Zone 3: 100 to 150 miles - Add \$5.00		
Zone 4: 150 miles & over - Add \$6.50		

LABO1184-008 06/01/2023

	Rates	Fringes
Laborers:		
Group 1.....	\$ 24.18	7.59
Group 2.....	\$ 25.82	7.59
Group 3.....	\$ 26.68	7.59
Group 4.....	\$ 27.65	7.59
Group 5.....	\$ 28.75	7.59

LABORERS CLASSIFICATIONS:

GROUP 1: All Counties: Chipper, Rip Rap Stoneman. Pinal County Only: General/Cleanup Laborer. Maricopa County Only: Flagger.

GROUP 2: Asphalt Laborer (Shoveling-excluding Asphalt Raker or Ironer), Bander, Cement Mason Tender, Concrete Mucker, Cutting Torch Operator, Fine Grader, Guinea Chaser, Power Type Concrete Buggy

GROUP 3: Chain Saw, Concrete Small Tools, Concrete Vibrating Machine, Cribber & Shorer (except tunnel), Hydraulic Jacks and similar tools, Operator and Tender of Pneumatic and Electric Tools (not herein separately classified), Pipe Caulker and Back-Up Man-Pipeline, Pipe Wrapper, Pneumatic Gopher, Pre-Cast Manhole Erector, Rigger and Signal Man-Pipeline

GROUP 4: Air and Water Washout Nozzleman; Bio-Filter, Pressman, Installer, Operator; Scaffold Laborer; Chuck Tender; Concrete Cutting Torch; Gunite; Hand-Guided Trencher; Jackhammer and/or Pavement Breaker; Scaler (using boson's chair or safety belt); Tamper (mechanical all types).

GROUP 5: AC Dumpman, Asbestos Abatement, Asphalt Raker II, Drill Doctor/Air Tool Repairman, Hazardous Waste Removal, Lead Abatement, Lead Pipeman, Process Piping Installer, Scaler (Driller), Pest Technician/Weed Control, Scissor Lift, Hydro Mobile Scaffold Builder.

PAIN0086-001 04/01/2017

	Rates	Fringes
PAINTER		
PAINTER (Yavapai County only), SAND BLASTER/WATER BLASTER (all Counties).....	\$ 19.58	6.40
ZONE PAY: More than 100 miles from Old Phoenix Courthouse \$3.50 additional per hour.		

* SUAZ2009-001 04/20/2009

	Rates	Fringes
CEMENT MASON.....	\$ 19.28	3.99
ELECTRICIAN.....	\$ 22.84	6.48
IRONWORKER (Rebar)		
Pima County.....	\$ 23.17	14.83
Pinal County.....	\$ 20.27	8.35
LABORER		
Asphalt Raker.....	\$ 15.49 **	3.49
Compaction Tool Operator....	\$ 14.59 **	2.91
Concrete Worker.....	\$ 13.55 **	3.20
Concrete/Asphalt Saw.....	\$ 13.95 **	2.58
Driller-Core, diamond, wagon, air track.....	\$ 16.94 **	3.12
Dumpman Spotter.....	\$ 14.99 **	3.16

Fence Builder.....	\$ 13.28 **	2.99
Flagger		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 12.35 **	1.59
Formsetter.....	\$ 16.09 **	3.97
General/Cleanup Laborer		
Coconino, Maricopa,		
Mohave, Pima, Yavapai &		
Yuma.....	\$ 14.54 **	3.49
Grade Setter (Pipeline).....	\$ 17.83	5.45
Guard Rail Installer.....	\$ 13.28 **	2.99
Landscape Laborer.....	\$ 11.39 **	
Landscape Sprinkler		
Installer.....	\$ 15.27 **	
Pipelayer.....	\$ 14.81 **	2.96
Powderman, Hydrasonic.....	\$ 16.39 **	2.58
OPERATOR: Power Equipment		
Asphalt Laydown Machine.....	\$ 21.19	6.05
Backhoe < 1 cu yd		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 17.37	3.85
Backhoe < 10 cu yd		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 18.72	3.59
Clamshell < 10 cu yd		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 18.72	3.59
Concrete Pump (Truck		
Mounted with boom only)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 19.92	7.10
Crane (under 15 tons).....	\$ 21.35	7.36
Dragline (up to 10 cu yd)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 18.72	3.59
Drilling Machine		
(including Water Wells).....	\$ 20.58	5.65
Grade Checker		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 16.04 **	3.68
Hydrographic Seeder.....	\$ 15.88 **	7.67
Mass Excavator.....	\$ 20.97	4.28
Milling Machine/Rotomill.....	\$ 21.42	7.45
Motor Grader (Finish-any		
type power blade)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 21.92	4.66
Motor Grader (Rough)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....	\$ 20.07	4.13
Oiler.....	\$ 18.15	8.24
Power Sweeper.....	\$ 16.76 **	4.44
Roller (all types Asphalt)		

Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 18.27	3.99
Roller (excluding asphalt).. Scraper (pneumatic tired) Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 15.65 ** \$ 17.69	3.32 3.45
Screed Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 17.54	3.72
Shovel < 10 cu yd Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 18.72	3.59
Skip Loader (all types <3 cu yd).....	\$ 18.28	5.30
Skip Loader (all types 3 < 6 cu yd) Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 18.64	4.86
Skip Loader (all types 6 < 10 cu yd).....	\$ 20.15	4.52
Tractor (dozer, pusher - all) Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 17.26	2.65

PAINTER

Coconino, Maricopa, Mohave, Pima, Pinal & Yuma..	\$ 15.57 **	3.92
---	-------------	------

TRUCK DRIVER

2 or 3 Axle Dump or Flatrack.....	\$ 16.27 **	3.30
5 Axle Dump or Flatrack.....	\$ 13.97 **	2.89
6 Axle Dump or Flatrack (< 16 cu yd).....	\$ 17.79	6.42
Belly Dump.....	\$ 14.67 **	
Oil Tanker Bootman.....	\$ 22.03	
Self-Propelled Street Sweeper.....	\$ 13.11 **	5.48
Water Truck 2500 < 3900 gallons.....	\$ 18.14	4.55
Water Truck 3900 gallons and over.....	\$ 15.92 **	3.33
Water Truck under 2500 gallons.....	\$ 15.94 **	4.16

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

** Workers in this classification may be entitled to a higher
minimum wage under Executive Order 14026 (\$17.20) or 13658
(\$12.90). Please see the Note at the top of the wage
determination for more information. Please also note that the
minimum wage requirements of Executive Order 14026 are not

currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

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 classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and

the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier. Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier. A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

State Adopted Rate Identifiers

Classifications listed under the "SA" identifier indicate that the prevailing wage rate set by a state (or local) government was 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. 01/03/2024 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:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter

* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described

in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====
END OF GENERAL DECISION"

CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN

Add the following new Section, **233 STORM WATER POLLUTION PREVENTION PLAN SUBMITTAL PROCESS**

233.1 DESCRIPTION

The Contractor shall use the Arizona Department of Environmental Quality (ADEQ) Smart NOI program for all submittals located at this web address:

<https://az.gov/app/smartnoi/>

The location of this process may change and it is the responsibility of the Contractor to verify the correct web address. All fees are the responsibility of the Contractor. The Contractor shall apply for a "Stormwater Construction General Permit" with the project type "MUNICIPAL/PUBLIC".

Before any construction on site begins, the Contractor shall submit the Notice of Intent (NOI) and the SWPPP through the Smart NOI program as the sole permittee. The Contractor shall not commence any construction activities until the ADEQ send a written Notice Of Intent assigning an AZCON number.

As required by ADEQ the Contractor shall submit a Notice of Termination (NOT) through the Smart NOI program. The Contractor shall receive final payment only after receiving a written Notice of Termination Acknowledgement from ADEQ.

Projects Impacting Impaired Waters

Projects that will have any construction taking place within ¼ mile of the Salt River between 23rd Avenue and the confluence of the Gila River will impact "Impaired Waters". These projects will require the Contractor to design, implement, and evaluate a Monitoring Plan for stormwater runoff from their construction activities. The Monitoring Plan must be site specific and will be submitted to ADEQ as an appendix to the SWPPP. ADEQ is the final authority in the approval of the monitoring plan. A copy of the SWPPP and the Monitoring Plan shall be kept on-site at all times. Additional copies of the Monitoring Plan should be made available to all personnel who anticipate participating in stormwater monitoring activities. The Contractor shall have a copy of the monitoring plan, approved SWPPP, NOI, and ADEQ Authorization to Discharge posted at the jobsite prior to ground disturbance.

Subcontractors

All subcontractors shall comply with all AZPDES requirements under the supervision of the General Contractor, and shall submit a completed, signed subcontractor certification form, thereby designating themselves as co-permittees.

233.2 SAMPLE SWPPP STRUCTURE

The following is a sample outline of the City requirement for a SWPPP submittal modeled after the ADEQ Construction General Permit Checklist. It shall be the Contractor's responsibility to meet all the ADEQ requirements for a SWPPP and retain a qualified consultant to complete the SWPPP, if necessary, at no additional cost to the City.

1 **SITE DESCRIPTION**

1.1 Project Name: **CONTRACTOR SHALL FILL IN PROJECT NAME**
 Project No(s): **CONTRACTOR SHALL FILL IN PROJECT NUMBER**

1.2 Project Location: **CONTRACTOR SHALL FILL IN FOR PROJECT SITE LOCATION**

1.3 Owner's Name:
 City of Phoenix, Street Transportation Department

1.4 Owner's Address:
 200 West Washington Street, 5th Floor, Phoenix, Arizona 85003

1.5 Project Description: **CONTRACTOR SHALL FILL IN PROJECT DESCRIPTION**

1.6 Runoff Coefficient and Soils Information:

1. Overall runoff coefficient of upstream drainage area shall be unchanged by project.
2. Surface Soils Information: **(EXAMPLE ONLY, CONTRACTOR SHALL FILL IN FOR PROJECT SITE LOCATION)**

<u>SOIL UNIT</u>	<u>SOIL TYPE (USDA TEXTURE)</u>	<u>PERMEABILITY (IN./HR.)</u>
<u>Laveen</u>	<u>Loam</u>	<u>0.6-2.0</u>
<u>Mohall</u>	<u>Clay Loam</u>	<u>0.2-0.6</u>
<u>Tucson</u>	<u>Clay Loam</u>	<u>0.2-0.6</u>
<u>Vecont</u>	<u>Clay</u>	<u>0.06-0.2</u>

1.7 Name of Receiving Water:
EXAMPLE: SALT RIVER, CONTRACTOR SHALL FILL FOR PROJECT SITE LOCATION

2 CONTROLS

2.1 Erosion and Sediment Controls

2.1.a Stabilization Practices:

Stabilization practices on this site include:

- Permanent planting.
- Save selected existing trees.
- Decomposed granite
- **CONTRACTOR SHALL ADD OR REMOVE STABILIZATION PRACTICES AS NECESSARY**

2.1.b Structural Practices:
 May include:

- Temporary retention areas (subgrade excavation areas).
- Temporary catch basin inlet protection.
- Silt fence.
- Gravel filter berm.
- Temporary diversion dike.
- Straw bale barriers.
- Sandbag berm
- **CONTRACTOR SHALL ADD OR REMOVE STABILIZATION PRACTICES AS NECESSARY**

2.1.c Narrative: Sequence of major activities.

CONTRACTOR SHALL COMPLETE NARRATIVE

2.1.d Storm Water Management: **(CONTRACTOR SHALL EDIT AS NECESSARY)**

Storm water drainage on will be provided by curb and gutter, catch basin inlets, and storm drains. No appreciable changes in runoff coefficients or in finished roadway grades will take place as a result of this project; therefore, no significant alterations of storm water drainage patterns or runoff quantities are expected.

During construction, storm water runoff will be managed by the following means, as conditions require:

- Temporary retention will be provided during roadway construction in areas excavated for subgrade.
- Silt fence, straw bales, sandbag berms, temporary diversion dikes, gravel filter berms or other BMP's as necessary to eliminate erosion may be used to prevent storm runoff from entering open storm drain pipes in excavated trenches. Temporary catch basin inlet protection may also be provided to remove sediment from drainage water before it enters the drainage system. Straw bale protection at outfall pipe locations may be employed during construction.

3 OTHER CONTROLS

3.1 Waste Disposal:

Waste Materials:

All waste materials including trash and construction debris from the site will be either disposed to a designated area immediately or collected and stored in securely-lidded metal dumpsters. The dumpsters will meet all local and State solid waste management regulations. The dumpsters will be emptied a minimum of once per week, or more often if necessary, and the trash will be hauled to an acceptable dump site. Lids will be closed at all times after work hours and during rain events. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedures for waste disposal. Notices stating these practices will be posted on site, and the site superintendent who manages the day-to-day site operations, will be responsible for seeing that these procedures are followed.

ENTER PHONE NUMBER AND NAME OF SITE SUPERINTENDENT

Concrete washout will only be allowed in designated areas. The hardened waste will be disposed of weekly and before final inspection of the project.

Hazardous Waste:

All hazardous waste materials will be disposed of in the manner specified by local or State regulations or by the manufacturer. Site personnel will be instructed in these practices, and the site

superintendent who manages day-to-day site operations, will be responsible for seeing that these practices are followed.

Sanitary Waste:

All sanitary sewage generated on-site will be collected from the portable units a minimum of twice per week or as required by local regulations. Units will have a berm placed around them to ensure no spillage can occur.

3.2 Off-Site Vehicle Tracking:

Traffic will be maintained on paved roadway throughout construction in order to reduce vehicle tracking of sediments. The paved street beyond the start and end of the project will be swept as often as necessary to remove any excess mud, dirt, or rock that may be tracked from the site by construction vehicles, but not less than once per week. Dump trucks hauling material to or from the construction site will be covered with tarpaulin before leaving the site.

4 DEMONSTRATION OF COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The following Federal, State, and City regulations are followed in the preparation of this storm water pollution prevention plan:

- Section 402(p) of the Clean Water Act.
- Amended Section 405 of the Water Quality Act.
- "ADEQ Arizona Pollutant Discharge Elimination System General Permit for Discharge from Construction Activities to Waters of the United States, Permit AZG-2008-001."
- Flood Control District of Maricopa County "Drainage Design Manual for Maricopa County, Arizona, Volume III, Erosion Control."
- City of Phoenix Code 32C, "Storm Water Quality Protection."
- City of Phoenix "Grading and Drainage Ordinance for Purpose of Fulfilling NPDES Requirements."

5 MAINTENANCE/INSPECTION PROCEDURES

5.1 Erosion and Sediment Control Practices:

The following is a list of erosion and sediment controls to be used during the construction period:

5.1.a Stabilization practices for this site include:

- Permanent planting.
- Save selected existing trees.
- Decomposed granite.
- **CONTRACTOR TO ADD/DELETE AS NECESSARY**

5.1.b Structural practices for this site will include:

- Silt fence/straw bale barriers.
- Temporary diversion dike/gravel filter berm.
- Sandbag berm.
- Storm drain, curb and gutter, catch basins.
- Temporary catch basin inlet protection.
- Temporary retention in subgrade excavation areas.
- **CONTRACTOR TO ADD/DELETE AS NECESSARY**

5.2 Erosion and Sediment Control Maintenance and Inspection Practice:

Following is a list of the inspection and maintenance practices that will be used to maintain erosion and sediment control:

- All control measures will be inspected at least once every 7 days and within 24 hours after each rain event of 0.1 inch or greater.
- All measures will be maintained in good working order; if repair is necessary, it will be initiated within 24 hours of report. All changes will be completed within 14 days after an observation.
- Built-up sediment will be removed from silt fence when it has reduced the design capacity by 50%.
- Erosion control fabric and erosion control dikes will be inspected and any breaches promptly repaired.
- Permanent planting will be inspected for washout and healthy growth per specification requirements.
- A Compliance Evaluation Report will be made at each inspection to ensure all BMP's are functioning correctly.
- The site superintendent will be responsible for inspection, maintenance, and repair activities, and filling out the Compliance Evaluation Report.
- Personnel selected for inspection and maintenance responsibility will receive training from the site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used on-site in good working order.
- Only one side of roadways will be excavated for subgrade preparation at a time. This area will serve as temporary retention while traffic is maintained on the paved other half of the road. This will serve to control storm water and minimize tracking of sediments.

6 INVENTORY FOR POLLUTION PREVENTION PLAN (CONTRACTOR TO EDIT AS NECESSARY)

The materials or substances listed below are expected to be present on-site during construction:

- | | |
|----------------------------|------------------------------|
| • Concrete | • Wood |
| • Asphaltic Concrete | • Paints |
| • Fertilizers | • Herbicide/Pesticide |
| • Petroleum-Based Products | • Soil Treatment Products |
| • Cleaning Solvents/Agents | • Other Building Materials |
| • Sealants | • Water Used in Dust Control |

6.1 Spill Prevention

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff:

6.1.a Good Housekeeping:

The following good housekeeping practices will be followed on-site during the construction period:

- An effort will be made to store only enough product required to do the immediate job.
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under proper cover and palletized.
- Liquid products will be placed on secondary containment pallets.
- Fuel tanks will be double walled.
- Drip pans will be used under all spigots unless on secondary containment.

- Products will be kept in their original containers with the original manufacturers' label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The site superintendent will inspect daily to ensure proper use and disposal of materials.
- Concrete washout will only be allowed in designated areas. The hardened waste will be disposed of weekly and before final inspection of the project.

6.1.b Hazardous Products:

These practices are used to reduce the risks associated with hazardous materials:

- Products will be kept in original containers unless they are not resealable.
- Original labels and material safety data sheets will be retained.
- If surplus product must be disposed of, manufacturers', or local and State recommended methods for proper disposal will be followed.
- Products will be monitored, an inventory shall be conducted regularly, and documentation of all use and disposal shall be maintained.

6.2 Product Specific Practices:

The following product specific practices will be followed on-site:

6.2.a Petroleum Products:

All on-site vehicles will be monitored for leaks and receive regular preventative maintenance to reduce any chance of leakage. Petroleum products will be stored in tightly-sealed containers which are clearly labeled. Any petroleum substances used on-site will be applied according to the manufacturer's recommendations. Spills and leaks from vehicles will be stopped immediately. Any leaking vehicle will have a drip pan placed under the leak until the unit is repaired. Secondary containment will be provided for all petroleum products stored onsite.

6.2.b Fertilizers, Herbicide, Pesticide, Soil Treatment:

All materials used will be applied only in the minimum amounts recommended by the manufacturer or as per specification. Once applied, materials will be worked into the soil to limit exposure to storm water.

On-site storage will be covered and palletized to limit contact with storm water. The contents of any partially-used bags or containers will be transferred to a sealable plastic bin to avoid spills.

6.2.c Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm drain system or on the ground, but will be properly disposed of according to manufacturers' instructions or State and local regulations.

6.2.d Concrete Trucks:

Concrete trucks will not be allowed to wash out or discharge surplus concrete or dump wash water other than in a designated wash-out area. The hardened waste will be disposed of weekly and before final inspection of the project.

6.3 Spill Prevention Practices:

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area on-site. Equipment and materials will include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically designed for this purpose.
- All spills will be cleaned up immediately after discovery using dry cleanup methods.
- The spill area will be kept well-ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size—ADEQ Hotline: (602) 771-4505; City of Phoenix Hazardous Spills Emergency: 911; City of Phoenix Hazardous Spills Safety Section: (602) 262-7555.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and procedures to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The site superintendent shall be responsible for the day-to-day site operations, will be the spill prevention and cleanup coordinator. He will designate other site personnel who will receive spill prevention and cleanup training.

6.4 Documentation:

Documentation of all inspections, failed BMP's, corrective action and training shall be maintained onsite with the SWPPP at all times during the project, and shall be maintained for not less than three (3) years after the project is complete.

OTHER REQUIRED CERTIFICATIONS

The Contractor shall complete and submit the following certification forms to the City before construction begins:

- Permittee Certification
- Contractor Certification
- Subcontractor Certification (for all Subcontractors as necessary)
- Operator's Compliance Evaluation Report

PERMITTEE'S CERTIFICATION

As Contractor of the **Happy Valley Road: 67th Avenue to 35th Avenue Roadway Improvements Design-Bid-Build** project, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Company

Name: _____

Title: _____

Signature: _____

Date: _____

CONTRACTOR CERTIFICATION

I certify under penalty of law that I understand the terms and condition of the General Arizona Pollutant Discharge Elimination System (AZPDES) Permit that authorizes the storm water discharges associated with industrial activities from the construction site identified as part of this certification. Further, by my signature, I understand that I am becoming a co-permittee, along with the subcontractors signing such certifications, to the general (AZPDES) Permit for the storm water discharges associated with construction activities of the **Happy Valley Road: 67th Avenue to 35th Avenue Roadway Improvements Design-Bid-Build** project. As a co-permittee, I understand that I, and my company, are legally required under the Clean Water Act, to ensure compliance with the terms and conditions of the storm water pollution prevention plan developed under the AZPDES Permit and the terms of the AZPDES Permit.

General Contractor and Responsibility

Name: _____

Title: _____

Signature: _____

SUBCONTRACTOR'S CERTIFICATION

I certify under penalty of law that I understand the terms and conditions of the General Arizona Pollutant Discharge Elimination System (AZPDES) Permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification. Further, by my signature, I understand that I am becoming a co-permittee, along with the owner(s) and other contractors and subcontractors signing such certifications, to the general AZPDES permit for the storm water discharges associated with construction activities of the **Happy Valley Road: 67th Avenue to 35th Avenue Roadway Improvements Design-Bid-Build** project. As a co-permittee, I understand that I, and my company, are legally required under the Clean Water Act, to ensure compliance with the terms and conditions of the storm water pollution prevention plan developed under the AZPDES permit and the terms of the AZPDES permit.

Authorized Representative of Subcontractor: _____

Signature: _____ Date: _____

For (Subcontractor Name): _____

Construction Activities: _____

Verification of Completion and Acceptance of Subcontractor's Work

All work to be performed by

_____ (Subcontractor) as part

of the _____ (Project) has been completed and accepted. Execution of this form

absolves said subcontractor from liability for AZPDES violations which may occur subsequent to this date as a result of activities of the general contractor or other subcontractors.

Authorized Representative of Subcontractor: _____

Signature: _____ Date: _____

For (Subcontractor Name): _____

Verified by (General Contractor): _____

Authorized Representative of General Contractor: _____

Signature: _____ Date: _____

AZG-2008-001 General Permit for Construction Activities

Operator's Compliance Evaluation Report

This project requires inspection of storm water pollution controls (BMPs) on a choice of frequency described in the General Permit, Part IV. H. Attach sheets if more space is needed.

Project: _____ Date: _____

Name & Title of Inspector: _____

Qualifications of Inspector: Attached; or Shown in Sec. _____ of the SWPPP.

Periodic Inspection; or Rain Event inspection

Relevant weather information: _____

1. Location(s) of discharge from the site: None; or Description: _____

2. Location(s) of and identification of BMPs that need to be maintained; failed to operate or proved to be inadequate:
 None; or Description: _____

3. Location(s) where additional BMPs are needed: None; or Description: _____

4. Corrective actions required, including changes and target dates: None; or Description: _____

5. Identify all sources of non-storm water and the associated pollution control measures: None; or
Description: _____

6. Identify material storage areas and evidence of, or potential for pollutant discharge from these areas: None; or
 Description: _____

7. Identify any other apparent incidents of non-compliance: None; or Description: _____

8. If no incidents of non-compliance are identified in items 1 through 7 above, the inspector certifies that the construction project is being operated in compliance with the SWPPP and the General Permit.

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Certifying Signature: _____ Date: _____

Printed Name: _____

Geotechnical and Pavement Design Report

Proposed Happy Valley Road Improvements From 67th Avenue to 35th Avenue Phoenix, Arizona

City of Phoenix Project No. ST85100437

Federal Aid No. PHX-0(363)D

ADOT TRACS No. T0239

Terracon Project No. 65215140

June 3, 2022

Prepared for:

Wilson & Company, Inc., Engineers & Architects
410 North 44th Street, Suite 460
Phoenix, Arizona

Prepared by:

Terracon Consultants, Inc.
Tempe, Arizona
480.897.8200



EXPIRES 6/30/2024

June 3, 2022

Wilson & Company, Inc., Engineers & Architects
410 North 44th Street, Suite 460
Phoenix, Arizona 85008

Attn: Mr. Todd J. Cencimino, P.E.
Phone: (602) 283-2732
Email: todd.cencimino@wilsonco.com

Re: **Geotechnical and Pavement Design Report
Proposed Happy Valley Road Improvements
From 67th Avenue to 35th Avenue
Phoenix, Arizona
City of Phoenix Project No.: ST85100437
Terracon Project No. 65215140**

Dear Mr. Cencimino:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical and pavement engineering services for the above referenced project. These services were performed in general accordance with our Proposal No. P65215140 – Revision 2, dated June 15, 2021. This geotechnical and pavement engineering report presents the results of the subsurface exploration and provides geotechnical and pavement engineering recommendations concerning the design of pavements for the project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.



Matthew R. Kleinholz, P.E.
Project Engineer

Ramon Padilla, P.E.
Geotechnical Services Manager

Copies to: Addressee (1 via email)



TABLE OF CONTENTS

	Page
1.0 INTRODUCTION	1
2.0 PROJECT INFORMATION	2
2.1 Project Description.....	2
2.2 Site Description.....	3
3.0 SUBSURFACE CONDITIONS	4
3.1 Site Geology	4
3.2 Subsurface Soil Conditions	5
3.3 Laboratory Test Data	6
3.4 Groundwater Conditions	9
3.5 Expansion Potential	9
3.6 Corrosion Considerations.....	10
3.7 Pavement Condition Evaluation	11
3.7.1 Pavement Distress.....	12
3.7.2 Pavement Condition Rating	14
3.7.3 Pavement Evaluation Summary	15
4.0 PAVEMENT STRUCTURAL SECTION DESIGN	15
4.1 General.....	15
4.2 Traffic Analysis	15
4.3 Pavement Subgrade Parameters	16
4.4 Pavement Design Parameters	17
4.5 Pavement Thickness Design Recommendations	17
4.6 Existing Pavement Rehabilitation	18
4.7 New Pavement Construction and Rehabilitation Summary	20
4.8 Preliminary Economic Evaluation of Alternatives.....	20
5.0 MATERIALS DESIGN	22
5.1 Materials Specifications	22
5.2 Site Preparation and Earthwork	23
5.3 Excavation Characteristics.....	23
5.4 Permanent Slope Recommendations.....	24
5.5 Earthwork Factors.....	24
5.6 Grading and Drainage.....	24
6.0 GENERAL COMMENTS	25
 Appendix A – Field Exploration	 Exhibit No.
Site Vicinity Map and Site Location	A-1
Exploration Plan	A-2
Field Exploration Description	A-3
General Notes	A-4
Unified Soil Classification System.....	A-5
Boring Logs	A-6 thru A-21
Pavement Condition Index Surveys.....	A-22 thru A-27

TABLE OF CONTENTS (Continued)

	Exhibit No.
Appendix B – Laboratory Testing	
Laboratory Test Description.....	B-1
Atterberg Limits Results	B-2
Grain Size Distribution.....	B-3 thru B-6
Moisture-Density Relationship	B-7 thru B-14
R-Value Test Results.....	B-15 thru B-22
Summary of Laboratory Results	B-23 and B-24
Motzz Laboratory Test Results	B-25 thru B-27
Appendix D – Pavement Design	
Design Traffic Analysis	C-1
Design Resilient Modulus Analysis	C-2
Flexible Pavement Design Analysis	C-3
Earthwork Shrinkage Estimates.....	C-4
Pavement Life Cycle Cost Analysis	C-5

List of Abbreviations

AASHTO	American Association of State Highway and Transportation
ABC	Aggregate Base Course
AC	Asphalt Concrete
ACI	American Concrete Institute
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
ASTM	American Society for Testing and Materials
AR	Asphalt Rubber
AZGS	Arizona Geological Survey
CMP	Corrugated Metal Pipe (culvert)
COP	City of Phoenix
CTS	Cement Treated Soil
DDF	Directional Distribution Factor
ESALs	Equivalent 18-kip Single Axle Loads
GI	AASHTO Group Index
GMSSC	Geogrid Mechanically Stabilized Soil Cement
LSS	Lime Stabilized Subgrade
MAG	Maricopa Association of Governments
MCDOT	Maricopa County Department of Transportation
MSL or AMSL	Mean Sea Level or Above Mean Sea Level
OGF	Overall Growth Factor
OSHA	Occupational Safety and Health Administration
PI	Plasticity Index
pcf	Pounds per cubic foot
ppm	Parts per million
psf	Pounds per square foot
psi	Pounds per square inch
RFS	Request for Scope
SPT	Standard Penetration Test
SN	Structural Number
TEF	Traffic Equivalency Factor

**GEOTECHNICAL AND PAVEMENT DESIGN REPORT
PROPOSED HAPPY VALLEY ROAD IMPROVEMENTS
FROM 67TH AVENUE TO 35TH AVENUE**

PHOENIX, ARIZONA

CITY OF PHOENIX CONTRACT NO. ST85100437

Terracon Project No. 65215140

June 3, 2022

1.0 INTRODUCTION

This report presents the results of our geotechnical and pavement engineering services performed for proposed Happy Valley Road roadway improvements extending from 67th Avenue to 35th Avenue in Phoenix, Arizona. The purpose of our engineering services is to provide information and geotechnical and pavement engineering recommendations relative to the following:

- subsurface soil conditions
- pavement design and construction
- earthwork
- groundwater conditions
- pavement materials specifications

Our geotechnical engineering scope of work for the subsurface exploration for this project included 16 borings (designated as R-2 through R-17). Planned Boring B-1 was not performed due to conflicts with existing underground utilities. In addition, our geotechnical engineering services included laboratory testing, pavement evaluation observations, geotechnical engineering analysis, pavement engineering analyses, and preparation of this report.

Appendix A includes the following: Site Location (Exhibit A-1), Exploration Plan (Exhibit A-2), logs of the borings (Exhibits A-6 through A-21). The pavement condition surveys performed at selected boring locations are also summarized in Appendix A as Exhibits A-22 through A-27. The results of the laboratory testing performed on selected and representative soil samples obtained from the site during the field explorations are included in Appendix B of this report. Descriptions of the field explorations and laboratory testing are included in their respective appendices. Design worksheets for the pavement design are included in Appendix C.

2.0 PROJECT INFORMATION

2.1 Project Description

Item	Description
Project Description	<p>We understand the City of Phoenix Street Transportation Department is evaluating opportunities to improve Happy Valley Road from 67th Avenue to 35th Avenue. Happy Valley Road is a major arterial roadway that connects commuters to Interstate Highway 17 and supports local and regional residential activities. The proposed roadway improvements will include roadway widening to accommodate a third travel lane between 62nd and 56th Avenues, and between 51st and 47th Avenues. Other proposed roadway improvements include raised medians, buffered bike lanes, new curb and gutter (where missing), ADA improvements, pavement preservation, signing and markings, additional bus shelters, intersection improvements, street lighting and traffic signal upgrades, and drainage improvements, as needed.</p>
Proposed Structures	<p>None are planned.</p>
Grading	<p>The proposed finished grades at the site are anticipated to remain about the same. Therefore, cuts and fills are anticipated to be minimal (of a few feet or less). We understand cuts and fills are planned for the widening between 62nd and 56th Avenues.</p>
Pavements	<p>Based on information provided, the following is a summary of the traffic and roadway information for the project. Happy Valley Road is classified as a Major Arterial and the existing roadway consists of variable 4 to 6 lanes (2 to 3 lanes in each direction with variable raised and at-grade medians and center turn lanes). The proposed roadway improvements include widening Happy Valley Road to 6 lanes (3 lanes in each direction with raised center median).</p> <p>The traffic data for the project was provided by Wilson & Company including roadway classification, Average Daily Traffic (ADT), predicted growth rates and truck percentages. Based on the information provided, we understand the following outlines the traffic data for this roadway:</p> <ul style="list-style-type: none"> ■ Happy Valley Road – 2020 ADT two-way traffic volume: 33,768 ■ Estimated yearly average growth rate for the project: 1.1% ■ Estimated percent truck traffic for the project: 6%

2.2 Site Description

Item	Description
Location	The proposed project consists of proposed Happy Valley Road roadway improvements extending from 67th Avenue to 35th Avenue in Phoenix, Arizona. See the attached Site Location (Exhibit A-1) and Exploration Plan (Exhibit A-2) in Appendix A for additional site location information.
Existing Improvements	The roadway shifts between 2 and 3 travel lanes (in each direction). In addition, the consistency and presence of curb, gutter, sidewalk, raised medians, and bike lanes is variable.
Current Ground Cover	The existing ground cover at the site consists of asphalt concrete pavement generally followed by sidewalks and landscaped areas.
Existing Topography	Appears to be relatively flat.

The Happy Valley Road alignment for the project has undergone various roadway improvements throughout time, from being an intermittent graded path in the 1950s, to a graded alignment in the 1960s and 1970s, to a rural residential/collector road in the 1980s, to transitioning into an arterial roadway with various widenings and improvements from the 1990s to date. The existing roadway is comprised of various previous widenings and improvements throughout time resulting in variability of the pavement condition and (possibly) existing pavement thicknesses throughout the project alignment.

Based on a cursory review of available aerial photographs, a large number of variable pavement conditions with variable distress and severity are apparent not only along the alignment, but generally also across the width of the roadway. The following are aerial photographs along Happy Valley Road (between 67th Avenue and 35th Avenue) showing the variable existing pavement conditions across the project alignment:





3.0 SUBSURFACE CONDITIONS

3.1 Site Geology

The project area is located in the Basin and Range physiographic province (¹Cooley, 1967) of the North American Cordillera (²Stern, et al, 1979) of the southwestern United States. The southern portion of the Basin and Range province is situated along the southwestern flank of the Colorado Plateau and is bounded by the Sierra Nevada Mountains to the west. Formed during middle and late Tertiary time (100 to 15 million years ago), the Basin and Range province is dominated by fault-controlled topography. These mountain ranges and valleys have evolved from generally complex movements and associated erosional and depositional processes. Structurally, the site lies within the Phoenix Basin. Drainage flows to the Gila River during late Tertiary time, coupled with structural activity discussed above, are generally responsible for the present-day topography within the basin.

Typically, the ranges in this area are of small areal extent but protrude significantly above adjacent wide alluviated plains and valleys. The basin rims are formed by the mountain ranges which consist of sedimentary, igneous, and metamorphic materials which have been subjected to

¹ Cooley, M.E., 1967, **Arizona Highway Geologic Map**, Arizona Geological Society.

² Stern, C.W., et al, 1979, **Geological Evolution of North America**, John Wiley & Sons, Santa Barbara, California.

recurrent faulting and tilting, and in some places volcanic and intrusive events. As a result of erosion, the valleys have experienced partial infilling with sedimentary material which has been deposited as alluvial fans. Occasionally, the valleys may become interlocking as a result of coalescing alluvial fans which are referred to as bajadas.

Surficial geologic conditions mapped across the majority of the site (³Richard, et al, 2000) consist of late and middle Pleistocene surficial deposits. This unit consists of unconsolidated to weakly consolidated alluvial fan, terrace, and basin-floor deposits with moderate to strong soil development. Fan and terrace deposits are primarily poorly sorted, moderately bedded gravel and sand, and basin-floor deposits are primarily sand, silt, and clay.

An isolated occurrence of a second geologic unit consisting of middle Miocene and Oligocene volcanic rocks is mapped along roughly 900 feet of the alignment at the western end of the project in the area of the intersection with 64th Avenue. This unit is described as lava, tuff, fine-grained intrusive rock, and diverse pyroclastic rocks. These compositionally variable volcanic rocks include basalt, andesite, dacite, and rhyolite. Thick felsic volcanic sequences form prominent cliffs and range fronts in the Black (Mohave County), Superstition, Kofa, Eagletail, Galiuro, and Chiricahua Mountains. This unit includes regionally extensive ash-flow tuffs, such as the Peach Springs tuff of northwestern Arizona and the Apache Leap tuff east of Phoenix. Most volcanic rocks are 20-30 Ma in southeastern Arizona and 15 to 25 Ma in central and western Arizona, but this unit includes some late Eocene rocks near the New Mexico border in east-central Arizona.

3.2 Subsurface Soil Conditions

Specific conditions encountered at each boring are indicated on the individual boring logs included in Appendix A (Exhibits A-6 through A-21) of this report of this report. Stratification boundaries on the boring logs represent the approximate location of changes in soil types; in-situ, the transition between materials may be gradual. The following table summarizes the pavement thicknesses observed and the subgrade soil conditions encountered.

Summary of Pavement Travel Lanes			
Location ¹	Approx. AC Thickness (inches)	Approx. ABC Thickness (inches)	Subgrade Soils Underlying the Existing Pavement Structure
R-2	6	5	Clayey Sand with Gravel (SC)
R-3	4	5	Sandy Lean Clay (CL)
R-4	3	4	Clayey Sand (SC)

³ Richard, S. M., Reynolds, S.J., Spencer, J. E., and Pearthree, P. A., 2000, **Geologic Map of Arizona**: Arizona Geological Survey Map 35, 1 sheet, scale 1:1,000,000.

Summary of Pavement Travel Lanes			
Location ¹	Approx. AC Thickness (inches)	Approx. ABC Thickness (inches)	Subgrade Soils Underlying the Existing Pavement Structure
R-5	5	5	Silty Sand (SM)
R-6	5	8	Clayey Sand with Gravel (SC)
R-7	5	5	Sandy Fat Clay (CH)
R-8	6	7	Clayey Sand (SC)
R-9	5	5	Sandy Lean Clay (CL)
R-10	8	8	Clayey Sand (SC)
R-11	5	2	Clayey Sand (SC)
R-12	5	2	Sandy Lean Clay (CL)
R-13	6	6	Clayey Sand with Gravel (SC)
R-14	3.5	3.5	Sandy Lean Clay with Gravel (CL)
R-15	7	5	Sandy Lean Clay (CL)
R-16	6.5	2.5	Sandy Fat Clay (CH)
R-17	4.5	4	Sandy Lean Clay (CL)

Based on conditions encountered in the borings, subsurface conditions on the project site can be generalized as follows:

Description	Approximate Depth to Bottom of Stratum (feet)	Material Description	Relative Density / Consistency
Surface	±7 to 16 inches thick	Existing Pavement (AC & ABC)	---
Stratum 1	5.5 (maximum depth exploration)	Silty Sand, Clayey Sand, Sandy Lean Clay, Sandy Fat Clay with Variable Gravel Content	Loose to Very Dense / Stiff to Hard

3.3 Laboratory Test Data

Laboratory tests were performed on selected soil samples and the test results are presented in Appendix B. Soil samples obtained from the borings were used for geotechnical and pavement engineering analysis for the proposed project. The following is a summary of laboratory testing performed on selected soils samples obtained from the borings:

Summary of Laboratory Testing	
Laboratory Test	Description of Test Results
Atterberg Limits/Gradation	The Atterberg limits test results of the near surface soils along the project alignment generally exhibit medium to high plasticity characteristics (with plasticity indices ranging from 11 to 35, with an average of 24). The gradation test results of these near surface soils indicate percent fines (percent passing the sieve No. 200) ranging from approximately 33 to 68 percent (with an average of 50), percent sand ranged from approximately 26 to 54 percent, and percent gravel ranged from about 4 to 22 percent.
Moisture Content/Dry Density	Testing of ring samples obtained from the borings at depths within the near surface soils (upper 2 feet) indicated in-situ moisture contents ranging from approximately 5 to 19 percent with an average of approximately 10.6 percent; and in-situ dry densities ranging from approximately 82 to 119 pounds per cubic foot (pcf) with an average of approximately 100 pcf.
Laboratory Moisture-Density Relationships	Standard Proctor (ASTM D698) test results indicated maximum dry densities of the site soils ranging from approximately 106.3 to 121.0 pounds per cubic foot (pcf) at optimum moisture contents ranging from approximately 11.7 to 17.6 percent.
R-Value Testing	R-value testing indicated R-values of the subgrade soils ranging from approximately 12 to 64 with an average of 29.
Swell Potential	Swell potential testing indicated swell potentials of the subgrade soils ranging from approximately 1.1 to 9.5 percent with an average of 3.6 percent.

The following table indicates the roadway subgrade soils classification based on the American Association of State Highway and Transportation Officials (AASHTO) soil classification system. Based on this classification, the pavement subgrade materials underlying the proposed new roadways are generally considered to generally have Poor support characteristics for pavements with isolated occurrences at the location of Borings R-6 and R-13 of Excellent to Good support characteristics for pavements.

SUBGRADE SOIL CLASSIFICATION				
Boring No.	Approx. Depth (feet)	USCS Classification	AASHTO Classification	AASHTO Group Index
R-2	1 – 5	SC	A-6	2
R-3	1 – 5	CL	A-6	6
R-4	0.5 – 4	SC	A-6	5
R-5	1 – 4.5	SM	A-7-5	5
R-6	1 – 5	SC	A-2-7	2
R-7	1 – 5	CH	A-7-6	14
R-8	1 – 5	SC	A-7-6	4

Geotechnical and Pavement Design Report

Proposed Happy Valley Road Improvements ■ Phoenix, Arizona

June 3, 2022 ■ Terracon Project No. 65215140



SUBGRADE SOIL CLASSIFICATION				
Boring No.	Approx. Depth (feet)	USCS Classification	AASHTO Classification	AASHTO Group Index
R-9	1 – 5	CL	A-7-6	15
R-10	1.5 – 5	SC	A-7-6	11
R-11	1 – 5	SC	A-6	3
R-12	1 – 5	CL	A-7-6	14
R-13	1 – 5	SC	A-2-6	0
R-14	0.5 – 5	CL	A-7-6	11
R-15	1 – 5	CL	A-7-6	15
R-16	1 – 5	CH	A-7-6	22
R-17	1 – 5	CL	A-7-6	14

Note: The AASHTO Classifications indicate the following general subgrade support characteristics:

	Indicates Excellent to Good Subgrade Support Characteristics
	Indicates Fair Subgrade Support Characteristics
	Indicates Fair to Poor Subgrade Support Characteristics

The AASHTO classification method provides for the calculation of a Group Index, which is used as a scale for rating soil quality within a group. The Group Index (GI) values from the laboratory testing are summarized in the table above. Based on the Group Index values, the subgrade soils are considered somewhat uniform along the project alignment.

The results of the laboratory testing including the correlated R-Values and tested R-Value are summarized in the following table:

SUMMARY OF CORRELATED AND TESTED R-VALUES						
Boring	Depth (ft.)	LL	PI	-#200	R-Value Tested	R-Value Correlated
R-2	1 – 5	38	14	38.6	64	29.4
R-3	1 – 5	37	18	52	---	20.5
R-4	0.5 – 4	39	21	42.5	29	19.3
R-5	1 – 4.5	61	27	38	---	15.2
R-6	1 – 5	41	22	33.2	26	20.1
R-7	1 – 5	59	34	51.5	---	10.6
R-8	1 – 5	43	22	40	40	18.8
R-9	1 – 5	47	26	66.4	21	12.6
R-10	1.5 – 5	55	33	46.9	---	11.3

SUMMARY OF CORRELATED AND TESTED R-VALUES						
Boring	Depth (ft.)	LL	PI	-#200	R-Value Tested	R-Value Correlated
R-11	1 – 5	33	16	45.1	---	24.5
R-12	1 – 5	47	28	59.1	12	12.4
R-13	1 – 5	28	11	35.4	30	36.4
R-14	0.5 – 5	48	29	51.1	---	12.6
R-15	1 – 5	43	25	67.7	---	13.0
R-16	1 – 5	54	35	68.4	12	9.4
R-17	1 – 5	46	29	59.4	---	11.9

3.4 Groundwater Conditions

Groundwater was not observed in any of the test borings at the time of our field exploration, nor when checked upon completion of drilling. These observations represent groundwater conditions at the time of the field exploration and may not be indicative of other times, or at other locations. Groundwater conditions can change with varying seasonal and weather conditions, and other factors. Based on information obtained from the Arizona Department of Water Resources – Groundwater Data website (<https://gisweb.azwater.gov/waterresourcedata/GWSI.aspx>), the depth to regional groundwater in the vicinity of the site is presented in the following table:

Well Reg. I.D.	Depth to Groundwater (ft)	Water Elevation (ft MSL)	Date Last Checked	Comment
Local ID: A-04-01 12DAA	444	906	6/10/1996	Approx. 0.6 miles south of Happy Valley Road and 67 th Avenue intersection
Local ID: A-04-02 08DAA	486	915	11/2/1999	Approx. ½-mile south of Happy Valley Road and 51 st Avenue intersection
Local ID: A-04-02 11ADB	350	1,079	11/30/2020	Approx. ¾-mile east of Happy Valley Road and 35 th Avenue intersection

3.5 Expansion Potential

The near surface soils encountered at the site along the proposed roadway improvements were generally comprised of clayey sand, sandy lean clay, and sandy fat clay with variable gravel contents. The plasticity characteristics of these site soils ranged from medium to high plasticity. Our laboratory testing also included performing standard laboratory moisture-density relationships (i.e. standard Proctor ASTM D698) and remolded swell tests on the near surface soils sampled from our borings. The remolded swell testing on the soils indicated expansion potentials ranging from approximately 1.1 to 9.5 percent (with an average of 3.6 percent) when

compacted to approximately 95 percent of their maximum dry density (ASTM D698) at a moisture content of approximately 2 percent below optimum with 100 pounds per square foot (psf) surcharge. Based on the average results of our field and laboratory testing, we anticipate the site soils to generally exhibit moderate expansion potentials.

3.6 Corrosion Considerations

Laboratory testing was performed on select samples obtained from the field exploration to determine corrosion potential for the project. The results of the laboratory testing are summarized in the following table:

Summary of Chemical Laboratory Testing					
Boring	Depth (feet)	pH	Minimum Resistivity (ohm-cm)	Sulfates (ppm)	Chlorides (ppm)
R-3	0.8 – 5	8.7	2,771	26	<3
R-5	0.8 – 4.5	8.9	4,556	86	<3
R-7	0.8 – 5	8.5	3,281	86	4.8
R-10	1.3 – 5	8.9	3,982	67	<3
R-11	0.8 – 5	9.0	2,453	64	<3
R-14	0.6 – 5	8.7	2,147	39	<3
R-15	1 – 5	8.8	1,369	192	17
R-17	0.7 – 5	8.3	2,325	81	13

Based on the American Concrete Institute (ACI) Design Manual, Section 318, Chapter 19 (ACI 318), concentrations of Sulfates of less than 0.1 percent are considered to result in a low sulfate exposure. The concentration of sulfate indicated by the laboratory testing is anticipated to result in a low sulfate exposure to concrete placed at the site. Therefore, American Society for Testing and Materials (ASTM) Type I/II portland cement is considered suitable for concrete at the site in contact with similar soluble sulfate concentrations. In addition, the laboratory test results indicate the site soils have a chloride content below the chloride limits outlined in Chapter 19 of the ACI 318 for new concrete construction.

These laboratory test values should be used to help determine potential corrosive characteristics of the on-site soils with respect to contact with the various underground materials which will be used for project construction. Refer to Summary of Laboratory Results contained in Appendix B for the complete results of the corrosivity testing performed on the site soils in conjunction with this geotechnical exploration. The corrosion information presented is specific to the samples tested. If the actual soils that will be in contact with the structures at the site are different than those tested, then additional corrosion testing should be performed. Terracon is not a corrosion

engineer, and our scope of work was limited to performing corrosion laboratory tests on selected samples, presenting these results, and providing a brief comparison of the results to selected criteria. A qualified corrosion engineer should be consulted if corrosion of underground utilities and structures is a concern.

3.7 Pavement Condition Evaluation

The condition of the existing pavement was evaluated at 16 sample unit locations along the project alignment, representing coverage of approximately 5 to 10 percent of the total pavement area for the project. These locations were typically in the vicinity of each boring location. The sample unit area of approximately 2,500 square feet of existing roadway area were evaluated at each selected location. The general locations and size of these pavement sample units are summarized as follows:

Sample Unit Number	Approximate Location	Nearest Boring Location(s)	Sample Area (ft ²)
2	W/B Happy Valley Road, Between 65 th and 64 th Avenues	R-2	1,980
3	Median of Happy Valley Road, Between 62 nd and 61 st Avenues	R-3	1,500
4	Median of Happy Valley Road, East of 61 st Avenue	R-4	1,800
5	Median of Happy Valley Road, West of Glendale Community College	R-5	1,800
6	Median of Happy Valley Road, West of 55 th Avenue	R-6	1,800
7	Median of Happy Valley Road, Between 55 th and 53 rd Avenues	R-7	2,250
8	W/B Happy Valley Road, Between 53 rd and 51 st Avenues	R-8	2,100
9	E/B Happy Valley Road, Between 51 st and 49 th Avenues	R-9	2,100
10	Median of Happy Valley Road, Between 49 th and 48 th Avenues	R-10	1,500
11	W/B Happy Valley Road, Between 47 th and 45 th Avenues	R-11	2,640
12	W/B Happy Valley Road, Between 45 th and 43 rd Avenues	R-12	2,100
13	E/B Happy Valley Road, Between 43 rd and 41 st Avenues	R-13	2,590
14	W/B Happy Valley Road, Between 41 st and 39 th Avenue	R-14	2,242
15	E/B Happy Valley Road, Between 39 th and 37 th Drives	R-15	1,536
16	W/B Happy Valley Road, East of 37 th Drive	R-16	1,960
17	W/B Happy Valley Road, West of 35 th Avenue	R-17	1,920

This pavement condition evaluation was based on the procedures outlined in ASTM D6433-11, *Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys*. Engineering observations of the pavements were performed between October 27 and November 1, 2021. The engineering observations were made to determine the types, amounts and severity of existing pavement distress in the sample units selected along the alignment.

3.7.1 Pavement Distress

The distresses outlined in this section are limited to the observations performed at the selected survey sample areas. As previously mentioned, the Happy Valley Road alignment for the project has undergone various roadway improvements throughout time. The existing roadway is comprised of various previous widenings and improvements throughout time resulting in variability of the pavement condition and the existing pavement thicknesses throughout the project alignment. A large number of variable pavement conditions with variable distress and severity are present not only along the alignment, but generally also across the width of the roadway.

Distress observed in the pavements on the roadway can be grouped into two broad categories which include:

Category I	Category II
Structural Distress	Climate/Durability Distress
<ul style="list-style-type: none"> ■ Alligator ■ Potholes ■ Patching 	<ul style="list-style-type: none"> ■ Longitudinal and Transverse Cracking ■ Block Cracking ■ Weathering & Raveling

Structural distress is considered the most detrimental to pavement condition and when present, will shorten pavement life when preventative maintenance or rehabilitation measures are not undertaken on a timely basis. Climate/durability related distress usually contributes to deterioration in pavement serviceability. While less detrimental than structural distress, maintenance measures are usually employed for climate/durability distress to maintain safe pavement conditions.

The distresses observed in the asphalt pavements occur in varying degrees and locations in the pavement along the alignment. Descriptions of the distresses that have occurred in the pavement are as follows:

- **Alligator Cracking:** Alligator cracking was observed at the sample unit near Boring R-9. The alligator cracking on the roadway was generally of low severity at the location of Boring R-9. Alligator cracking, a structural distress, is usually the result of loss of support for the pavement through a reduction in the strength of the subgrade soils. However, alligator cracking can also be caused as a result of load related failure from traffic due to inadequate pavement thickness. Without proper maintenance or rehabilitation, alligator cracking usually increases in severity and propagates over larger areas of the pavement with infiltration of water to subgrade soils beneath the surface.
- **Longitudinal and Transverse Cracking:** Longitudinal and transverse cracking was observed at nearly all of the sample units. These types of cracks may or may not be load-related and are usually the result of climate, pavement durability or construction related

factors including poorly constructed paving lane joints or shrinkage of the asphalt surface due to low temperatures, hardening of the asphalt and/or daily temperature cycling. The longitudinal and transverse cracking observed was generally of low severity, however, medium severity cracking was observed at the sample units near Borings R-5 and R-6. Without proper maintenance or rehabilitation, this type of cracking can progress to more severe forms of pavement distress including block or alligator cracking, as can be seen along several areas of the alignment.

- **Block Cracking:** Block cracking was observed at the sample units near Borings R-2, R-7 through R-15, and R-17. The block cracking on the roadway was generally of low severity at most of the boring locations with the exception of the medium severity observed at the location of Boring R-14. Block cracking is interconnected cracks that divide the pavement into approximately rectangular pieces. The blocks may range in size from 1-foot by 1-foot to 10-feet by 10-feet. Block cracking is caused mainly by shrinkage of the asphalt concrete and daily temperature cycling (which results in daily stress/strain cycling) and is not load-related. Block cracking usually indicates that the asphalt has hardened significantly. Block cracking normally occurs over a large portion of the pavement area, but sometimes will occur only in non-traffic areas. This type of distress differs from alligator cracking in that alligator cracks form smaller, many-sided pieces with sharp angles.
- **Weathering:** Weathering was observed in most of the sample units. Weathering is the wearing away of the pavement surface due to a loss of asphalt or tar binder and dislodged aggregate particles. Surface wear is normally caused by oxidation, insufficient asphalt content, excessive natural sand, surface water erosion, and traffic. Asphalt surface beginning to show signs of aging which may be accelerated by climatic conditions. Weathering observed on the roadway at the noted sample units is considered low to medium in severity.
- **Potholes:** Potholes were observed at the sample unit near Borings R-13 and R-15. The potholes observed were considered low to medium in severity. Potholes are small, usually less than 30 inches in diameter bowl-shaped depressions in the pavement surface. They generally have sharp edges and vertical sides near the top of the hole.
- **Patching and Utility Cuts:** Patching and utility cuts (except where our borings were patched) were observed at the sample units near Borings R-5, R-15, and R-16. A patch is an area of pavement that has been replaced with new material to repair the existing pavement. A patch is considered a defect no matter how well it is performing. Generally, some roughness is associated with this distress. Patching and utility cuts observed on the roadway was generally of low to medium severity.

3.7.2 Pavement Condition Rating

The Pavement Condition Index (PCI) as referenced by the ASTM D6433 standard is calculated on the basis of deducting certain values based on the type, amount and severity of distress within a pavement sample. Theoretically, a newly constructed pavement, or one which has been recently rehabilitated to restore structural integrity, has a Pavement Condition Index of 100. Pavements with some level of distress have a PCI less than 100. The numerical index of PCI provides for an indication of overall pavement condition.

Based on our engineering evaluation of pavement distress and the numerical procedures for determination of the PCI as outlined in the ASTM standard, the Pavement Condition Index (PCI) for each pavement section is summarized as follows:

Sample Number	Nearest Boring Location	Sample Area (ft ²)	PCI for Section	Composite PCI Rating per ASTM D6433
2	R-2	1,980	92	Good
3	R-3	1,500	89	Good
4	R-4 (left-hand westbound lane)*	1,800	100	Good
5	R-5 (left-hand westbound lane)*	1,800	71	Satisfactory
6	R-6	1,800	85	Satisfactory
7	R-7	2,250	81	Satisfactory
8	R-8	2,100	91	Good
9	R-9	2,100	55	Poor
10	R-10	1,500	67	Fair
11	R-11	2,640	67	Fair
12	R-12	2,100	67	Fair
13	R-13	2,590	63	Fair
14	R-14	2,242	67	Fair
15	R-15	1,536	63	Fair
16	R-16	1,960	72	Satisfactory
17	R-17	1,920	69	Fair

PCI Range	0-10	11-25	26-40	41-55	56-70	71-85	86-100
PCI Rating	Failed	Serious	Very Poor	Poor	Fair	Satisfactory	Good

* A recent rehabilitation had been applied to the left-hand westbound lane which had not been applied to the right-hand westbound lane at these locations. The right-hand westbound lanes are expected to exhibit a reduced PCI rating.

3.7.3 Pavement Evaluation Summary

For most pavements, there is an approximate decrease of 40% in pavement condition over the first 75% of the life of the pavement, the point at which quality reaches a critical level. At that approximate age and at the critical PCI, predictions usually indicate a rapid increase in rate of deterioration and a significant decrease in the remaining life expectancy of the pavement unless planned maintenance and rehabilitation strategies are implemented. The current PCI for the pavement ranges from 52 to 100 (with an average of 75) with ratings ranging from Poor to Good. The overall rating from the 16 sample units is generally Fair to Satisfactory. The rating of the pavement is attributable to a combination of age (primarily evidenced by the climate/durability related distress observed in the pavement, blocking, weathering, etc.), structural distress (i.e. the longitudinal and transverse cracking, alligator cracking, etc.), and other distresses (i.e. potholes).

4.0 PAVEMENT STRUCTURAL SECTION DESIGN

4.1 General

Geotechnical and pavement engineering recommendations for the construction of the pavements associated with the proposed roadway improvements are presented in the following sections. These recommendations are based on our understanding of the project, the results of our field exploration and laboratory testing for the site, and our engineering analysis and design.

4.2 Traffic Analysis

The traffic data presented in this report such as roadway classification, Average Daily Traffic (ADT), predicted growth rates and truck percentages, and estimated unit costs were provided by Wilson & Company. Detailed design calculations regarding conversion of the traffic data to 18-kip Equivalent Axle Loads (ESALs) are included in Appendix C (Exhibit C-1) of this report. The following table summarizes the information provided by to Terracon:

Traffic Data						
Roadway Section	Street Classification	2020 ADT	Design Period (years)	Estimated Growth Rate (%)	Estimated Truck Percentage (*TEF 1.2)	Car Percentage (*TEF 0.0008)
Happy Valley Road (from 67 th to 35 th Avenues)	Major Arterial	33,768	20	1.1	6	94

*Note: Traffic Equivalency Factor (TEF).

We understand the above ADT data is two-way, and that each direction is assumed to receive the same amount of traffic, which results in a Directional Distribution Factor of 50 percent. The project roadways are planned to be 3-lanes in each direction; therefore, a Lane Distribution Factor of 70 percent was selected. Based on this information, the initial two-way daily traffic ($W_{0(2-18)}$), in terms of 18-kip equivalent single axle loads (ESALs), was determined by multiplying the number of cars and trucks by their TEF. Based on the data shown above, we also calculated the Overall Growth Factor (OGF) for a 20-year design period. The initial two-way daily traffic and OGF we calculated for the proposed roadway improvements are the following:

$W_{0(2-18)}$ and OGF		
Roadway Section	Initial Two-Way Daily 18-Kip ESAL ($W_{0(2-18)}$)	OGF
Happy Valley Road (from 67 th Avenue to 35 th Avenue)	2,456.7	22.23

The two-way 18-kip ESAL for the design period (W_{2-18}) was calculated by multiplying the initial two-way daily 18-kip ESAL by the OGF and by 365 days. The resulting values were then multiplied by the Directional Distribution Factor and by the Lane Distribution Factor in order to determine the design lane 18-kip ESALs (W_{18}). The two way 18-kip ESALs for the design period and the design lane 18-kip ESALs for the proposed roadway improvements are the following:

$W_{0(2-18)}$ and OGF		
Roadway Section	Two-Way 18-Kip Design ESAL (W_{2-18})	Design Lane 18-kip ESALs (W_{18})
Happy Valley Road	19,937,601	6,978,160

4.3 Pavement Subgrade Parameters

The design resilient modulus (M_R) for the pavement analyses was determined in accordance with the procedures of the MCDOT Roadway Design Manual. The methodology uses data from actual R-value tests as well as R-value data correlated with sieve and plasticity test results. Based on the results of the laboratory testing and our analyses of the AASHTO Group Index data, the subgrade conditions along the alignment of the proposed new pavements were averaged and a single design R-value was used along the entire length of the project. Samples of subgrade materials were tested for sieve analysis, plasticity index, and R-value. Based on the laboratory test results and in general accordance with the MCDOT Roadway Design Manual, the calculated mean R-value (R_{MEAN}) and corresponding soil resilient modulus (M_R) are shown in Appendix C and are summarized in the following table:

R_{MEAN} and M_R		
Roadway Section	Mean R- Value (R_{MEAN})	Resilient Modulus (M_R)
Happy Valley Road (from 67 th Avenue to 35 th Avenue)	18.2	11,175

4.4 Pavement Design Parameters

Analyses for the pavement design of the project were based on the procedures of AASHTO as modified by the MCDOT Roadway Design Manual. For purposes of the pavement design for the project, the roadways have been classified as “Major Arterial” roads in accordance with the MCDOT Roadway Design Manual. Based on this classification and other data outlined in this report, the following design parameters were determined by the procedures outlined in the MCDOT Roadway Design Manual and were utilized for pavement engineering analyses for the project:

Design Parameter		Per MCDOT Design Method
Analysis Period		20 years
Level of Reliability		95%
Standard Normal Deviate, Z _R		-1.645
Overall Standard Deviation		0.45
Serviceability	Initial (P ₀) PSI	4.5
	Terminal (P _t) PSI	2.5
Seasonal Variation Factor		1.0
Layer Structural Coefficients	*Asphalt Rubber (AR)	0.61
	Asphalt Concrete (AC)	0.42
	Aggregate Base (ABC)	0.12
	Lime-Treated Subgrade	0.16

*Applicable to AR used in the top 1.5 inches of the pavement surface.

4.5 Pavement Thickness Design Recommendations

Design calculations for the project incorporating the parameters outlined above are shown in Appendix C. Based on the results of the design calculations, the minimum Structural Number (SN) required for the project is summarized in the following table:

Geotechnical and Pavement Design Report

Proposed Happy Valley Road Improvements ■ Phoenix, Arizona

June 3, 2022 ■ Terracon Project No. 65215140



Pavement Design Summary			
Roadway Section	Design ESALs (20 years)	Design Resilient Modulus (M_R in psi)	Calculated Structural Number Required (SN)
Happy Valley Road	6,978,160	11,175	4.18

Based on the information provided as outlined in this report and in general accordance with the MCDOT Roadway Design Manual and the City of Phoenix Street Planning and Design Guidelines, the following table outlines the recommended pavement structure section for the project:

AC Recommended Pavement Section ^A	
Pavement Construction Item	Thicknesses (inches)
	Alt. A (w/ AR)
AR ARAC (½-inch mix) (MAG 325)	1.5
AC Pavement (½-inch mix) (MAG 321)	--
AC Pavement (½-inch mix) (MAG 321)	--
AC Pavement (¾-inch mix) (MAG 321)	5.0
Aggregate Base Course (MAG 310)	4.0 ^B
Lime Treated Subgrade (MAG 309)	6.0
Total Pavement Thickness:	16.5
Required Structural Number (SN):	4.18
Actual Structural Number (SN):	4.46

Note ^A: The asphalt concrete for this project is recommended to be based on an approved City of Phoenix mix. Asphalt Rubber (AR); Asphalt Concrete (AC); Aggregate Base Course (ABC).

Note ^B: Layered analyses indicated an aggregate base thickness of less than 4 inches is required for design purposes. However, the minimum thickness shown is recommended for drainage purposes.

Site grading within the new pavement areas should be accomplished as recommended in this report. A compacted subgrade of on-site soils or imported soils with equal or greater supporting properties is assumed. In an effort to reduce water infiltration and retard premature oxidation of the surfacing, the pavement surface should be sealed after the first summer of use, and routinely thereafter.

4.6 Existing Pavement Rehabilitation

The overall rating of the existing pavement condition along the project alignment ranged from Poor to Good based on our observations for the pavement evaluation survey. However, as previously mentioned, a large number of variable pavement conditions with variable distress and severity are

apparent not only along the alignment, but generally also across the width of the roadway. As a note, selected portions of the roadway had variable ratings (e.g., eastbound rated as Good and westbound rated as fair). The existing pavement section thicknesses and pavement conditions varied widely along the proposed alignment.

Generally, the existing asphalt pavement thicknesses observed at the locations of the test borings are considered sufficient for a 1½ to 2 inch mill and overlay program to slightly extend the serviceable life of the existing pavement. A mill and overlay rehabilitation is expected to extend the serviceable life of the pavements on the project for a relatively short period, and the underlying pavement distresses observed on the roadway are anticipated to propagate through the rehabilitation in a relatively short period of time. In addition, due to the variability of the pavement conditions across the project site, a mill and overlay rehabilitation is anticipated to perform differently across the project alignment. A mill and overlay procedure is considered a short-term rehabilitation option which will require increased future maintenance over a complete reconstruction and will not mitigate the swell potential of the underlying subgrade soils. If a mill and overlay procedure is considered, it should be focused in areas with decreased existing PCI ratings in the Fair to Poor range (approximately from the location of Boring R-9 to Boring R-17).

Complete reconstruction of the pavement structure is anticipated to mitigate and reduce the swell potentials of the subgrade soils, as well as provide a new pavement section based on the anticipated future traffic.

The Alternative A new pavement section recommended above for the anticipated traffic and the subgrade conditions provides a pavement section with a structural number of approximately 4.46, and this new pavement section recommendation mitigates/reduces the expansive potential of the underlying subgrade soils. Based on the average thicknesses encountered at the boring locations along the project alignment (of approximately 5.5 inches average of AC and approximately 5 inches of ABC average), the structural number for these average thicknesses for new pavement is approximately 2.9 (approximately 65% of 4.46); and because the existing pavement has already undergone some number of years of service life, the average effective structural number of the existing pavement is anticipated to be less than 2.9. The existing pavements along the project alignment are generally of sufficient thickness to accommodate milling and overlays on the order of 1.5 to 2 inches. The serviceable life of milling and overlaying cannot be estimated with any precision, where milling and overlaying would only be considered roadway maintenance to provide a relatively small extension of the serviceable life of the pavements. In addition, the performance of milled and overlaid pavement is anticipated to be variable due to the variable pavement conditions encountered along the project alignment. As traffic loadings increase with time on the effective structural number of less than 2.9 with the underlying subgrade conditions, the existing pavement underlying the mill and overlay is anticipated to continue to degrade and the frequency of required roadway maintenance is anticipated to also increase with time.

4.7 New Pavement Construction and Rehabilitation Summary

As previously mentioned, a large number of variable pavement conditions with variable distress and severity are exists along the alignment, and also across the width of the roadway. Based on the results of our field exploration and pavement condition observations as outlined in this report, the following outlines recommended pavement reconstruction and rehabilitation for the project alignment:

- 67th Avenue to 62nd Avenue – Mill and Overlay entire width of road (WB and EB)
- 62nd Avenue to 61st Avenue – Mill and Overlay EB lanes, Full Pavement Structure Replacement of WB lanes as part of roadway widening.
- 61st Avenue to GCC North (59th Avenue) – Full Pavement Structure Replacement of entire width of road (WB and EB)
- GCC North (59th Avenue) to Approximately 1200' East of GCC North - Mill and Overlay EB lanes, Full Pavement Structure Replacement of WB lanes as part of roadway widening.
- Approximately 1200' East of GCC North to 51st Avenue – Mill and Overlay entire width of road (WB and EB)
- 51st Avenue to 39th Drive – Full Pavement Structure Replacement of entire width of Road (WB and EB)
- 39th Drive to 35th Avenue - Mill and Overlay entire width of road (WB and EB)

The performance of milled and overlaid pavement is anticipated to be variable due to the variable pavement conditions encountered along the project alignment. The anticipated variable performance of pavements across the project alignment is anticipated will result in variable maintenance for the project alignment. This variability is anticipated to be more pronounced in mill and overlay areas adjacent to areas of new complete re-construction of the pavement structure.

4.8 Preliminary Economic Evaluation of Alternatives

The MCDOT Pavement Design Guide recommends an economic evaluation of the pavement design for this project. These preliminary cost estimates were prepared based on unit rates provided by MCDOT and their corresponding price factors presented in Section 10.3 of the MCDOT Roadway Design Manual. The following tables summarizes the estimated costs of the section determined from our analyses:

PRELIMINARY EVALUATION OF ALTERNATIVES			
Pavement Construction Item	Thickness (in)	Unit Price (\$/sy/in)	Costs Per Square Yard
	Alt. A		Alt. A
325 Asphalt Rubber ARAC	1.5	\$4.37	\$6.55
321 Asphalt Concrete Pavement	5	\$4.08	\$20.39
310 Aggregate Base Course	4	\$0.76	\$3.04
309 Lime Treated Subgrade Layer	6	\$0.40	\$2.40
Total Estimated Cost Per Square Yard			\$32.38

A full depth asphalt pavement section is not recommended due to the expansive potential of the subgrade soils. This evaluation only represents potential estimated initial costs and does not account for life-cycle costs which would include costs for future maintenance and rehabilitation efforts.

A preliminary economic evaluation of estimated initial and life cycle project costs was developed for the complete reconstruction and mill and overlay alternatives and is included in Appendix C (Exhibit C-5) of this report. This preliminary economic evaluation was developed for comparison between the alternatives for the project.

Unit costs for the initial rehabilitation recommendations and the costs for the expected global maintenances and future overlay programs were estimated based upon prevailing local prices, cost data obtained from RS Means Site Work Cost Data (2021), and experience with similar rehabilitation strategies. The actual unit costs for the project may vary from those used in our analysis due to location and local material costs.

Our preliminary economic analysis for each alternative was based on per lane mile costs. The life cycle cost analysis for each alternative includes the estimation of initial construction costs, maintenance over the design life (20 years), and salvage value at the end of the predicted useful life. Maintenance costs in the analysis include estimated periodic preventative procedures and periodic global surface treatments and overlays at maintenance schedules and costs experienced by COP and local practice. The costs which could potentially be expended over the life of each pavement alternative have been converted to Present Worth, using factors based upon an interest rate of five percent. Projected Average Annual Costs for each alternative have been based upon a 20-year Capital Recovery Factor. The results of our preliminary economic analyses are attached. While Alternative A (complete reconstruction) has a higher initial cost than Alternative B (mill and overlay procedures), the maintenance costs and rehabilitation costs are significantly lower. In addition, Alternative A has a higher salvage value than Alternative B at the end of the design life. The preliminary economic evaluation results indicate Alternative A has an average annual cost per lane mile of \$36,204.23 and Alternative B has an average annual cost per lane mile of \$40,987.73. This cost comparison is based on the assumed items outlined in the

preliminary economic evaluation, including the assumed number of millings and overlays; and variations in the assumed items will result in variations in the estimated preliminary costs.

Since Terracon has no control over the cost of labor, materials, equipment or services furnished by a potential contractor, a contractor's method of determining prices, or over competitive bidding or market conditions, the preliminary estimated costs were made on the basis of our experience and represents our best judgment as an experienced and qualified professional engineer, familiar with the construction industry. Terracon cannot and does not guarantee that proposals, bids or actual project or construction cost will not vary from the estimated values provided in the Preliminary Pavement Life Cycle Cost. Additionally, these costs do not include the additional costs for other aspects of the project such as traffic control and striping. If the preliminary estimated costs are required to be more detailed, then the services of a professional cost estimator are recommended.

5.0 MATERIALS DESIGN

5.1 Materials Specifications

The use of Maricopa Association of Governments (MAG) 2020 Uniform Standard Specifications and Details for Public Works Construction and MCDOT supplements are recommended for work on the project. Based on the recommendations outlined in this report, the specifications, at a minimum, should include those listed in the following table.

MAG Specification	Specification Title	Comments/Recommendations
201	Clearing and Grubbing	--
205	Roadway Excavation	--
206	Structure Excavation and Backfill	--
210	Imported Borrow	--
211	Fill Construction	All fills placed on the project should be compacted to a minimum of 95% of the maximum density determined in accordance with ASTM D698. Moisture conditioning the fill materials to within 2% of optimum moisture content is recommended.
301	Subgrade Preparation	Minimum depth of subgrade preparation in new pavement areas should be increased from 6 inches to 12 inches.
310	Placement and Construction of Aggregate Base Course	For areas of the site that may need a leveling course.
309	Lime Stabilization or Modification of Subgrade	Placement and construction of lime treated subgrade.

MAG Specification	Specification Title	Comments/Recommendations
321	Placement and Construction of Asphalt Concrete Pavement	½-inch and/or ¾-inch Gyratory Asphalt Mix for High Traffic Conditions is recommended for the asphalt concrete on this project in accordance with Table 710-5.
325	Placement and Construction of Asphalt-Rubber Asphalt Concrete	Placement and Construction of Asphalt-Rubber Asphalt Concrete
329	Tack Coat	Tack coat between AC layers.
702	Base Materials	For areas of the site that may need a leveling course, Aggregate Base Course on the project should conform to the requirements of Section 702.2.
710	Asphalt Concrete	½-inch and/or ¾-inch Gyratory Asphalt Mix for High Traffic Conditions is recommended to the asphalt concrete on this project in accordance with Table 710-5.
601	Trench Excavation, Backfilling and Compaction	--

Upon request, Terracon is available to assist in the review and development of the final specifications for the project.

5.2 Site Preparation and Earthwork

We recommend that all other site preparation and earthwork on the project be undertaken under the applicable portions of MAG Specifications. Recommended changes to these specifications as outlined in the preceding table should be included in the specifications or special provisions for the project.

Subgrade preparation in new pavement areas should include scarification, moisture conditioning, and compaction, as outlined in the MAG specifications. In addition, due to the loose relative density of the surface and near surface soils along the project alignment, the subgrade preparation beneath new pavement areas should be increased from the recommended 6-inch minimum depth outlined in the MAG specifications to a minimum depth of 12 inches.

5.3 Excavation Characteristics

It is anticipated that excavations within the upper 5 feet for the construction along the project roadway alignment can be accomplished with conventional earthmoving equipment capable of handling soils with loose to medium dense relative densities and variable gravel contents. The subgrade soils exposed during construction are expected to be relatively stable provided adequate slopes or shoring is implemented. In some areas of the site, pumping and yielding of subgrade soils could occur which may require the use of lightweight equipment. The stability of the subgrade may also be affected by precipitation, repetitive construction traffic or other factors.

The individual contractor(s) is responsible for designing and constructing stable, temporary excavations as required to maintain stability of both the excavation sides and bottoms. Excavations should be sloped or shored in the interest of safety following local and federal regulations, including current OSHA excavation and trench safety standards.

5.4 Permanent Slope Recommendations

The following recommendations are presented for construction of new permanent slopes for the project, if any. We recommend permanent unprotected cut and fill slopes be constructed at a slope ratio no steeper than 3H:1V (horizontal to vertical). For cut and fill slopes protected with slope paving, slopes no steeper than 2.5H:1V are recommended.

5.5 Earthwork Factors

The earthwork factors are based on a comparison of the in-situ nuclear density tests and dry densities from ring samples to the density of bulk samples compacted to 95 percent of maximum dry density as determined by ASTM D698. The estimated shrinkage of the upper roughly 2 feet of the site soils when used as compacted fill is expected to be an average of 9 percent shrinkage based on compacting the materials to a minimum of 95 percent of the maximum dry density determined in accordance with ASTM D698. These earthwork factor estimates are included in Appendix C on Exhibit C-4. Based on the average earthwork factor estimates, we recommend a shrinkage estimate of 10 percent be used for design purposes. Earthwork of subgrade soils at depths greater than 2 feet are anticipated to have a lower shrinkage estimated on the order of approximately 5 percent.

These estimates are general in nature, and are based on our experience, limited data from our field exploration, and the soil conditions we encountered at the site. Earthwork factors may vary dependent upon the actual subsurface conditions, which may include variations in soil gradations and gravel contents. Earthwork values are also expected to be less in areas subjected to lower levels of compaction or where the existing natural soils are denser. Similarly, earthwork values are also expected to be greater in areas subjected to higher levels of compaction or where the existing natural soils are looser.

A ground compaction factor of approximately 0.1 feet should be applied when estimating the change in elevation of the native soil surface due to scarification, moisture conditioning and re-compaction prior to fill placement.

5.6 Grading and Drainage

To the extent possible, grades should provide effective drainage away from the proposed pavement structures during and after construction. Water permitted to pond next to the pavements

can result in moisture content increases in subgrade soils and consequently in premature deterioration of the pavement structure and increased maintenance.

Positive drainage should be provided during construction and maintained throughout the life of the proposed improvements at the site. Infiltration of water into trenches should be prevented during construction. We recommend that protective slopes be provided with a minimum grade of approximately 5 percent for at least 10 feet from the pavement structures. Backfill placed at the site should be well compacted and free of all construction debris to reduce the moisture infiltration.

6.0 GENERAL COMMENTS

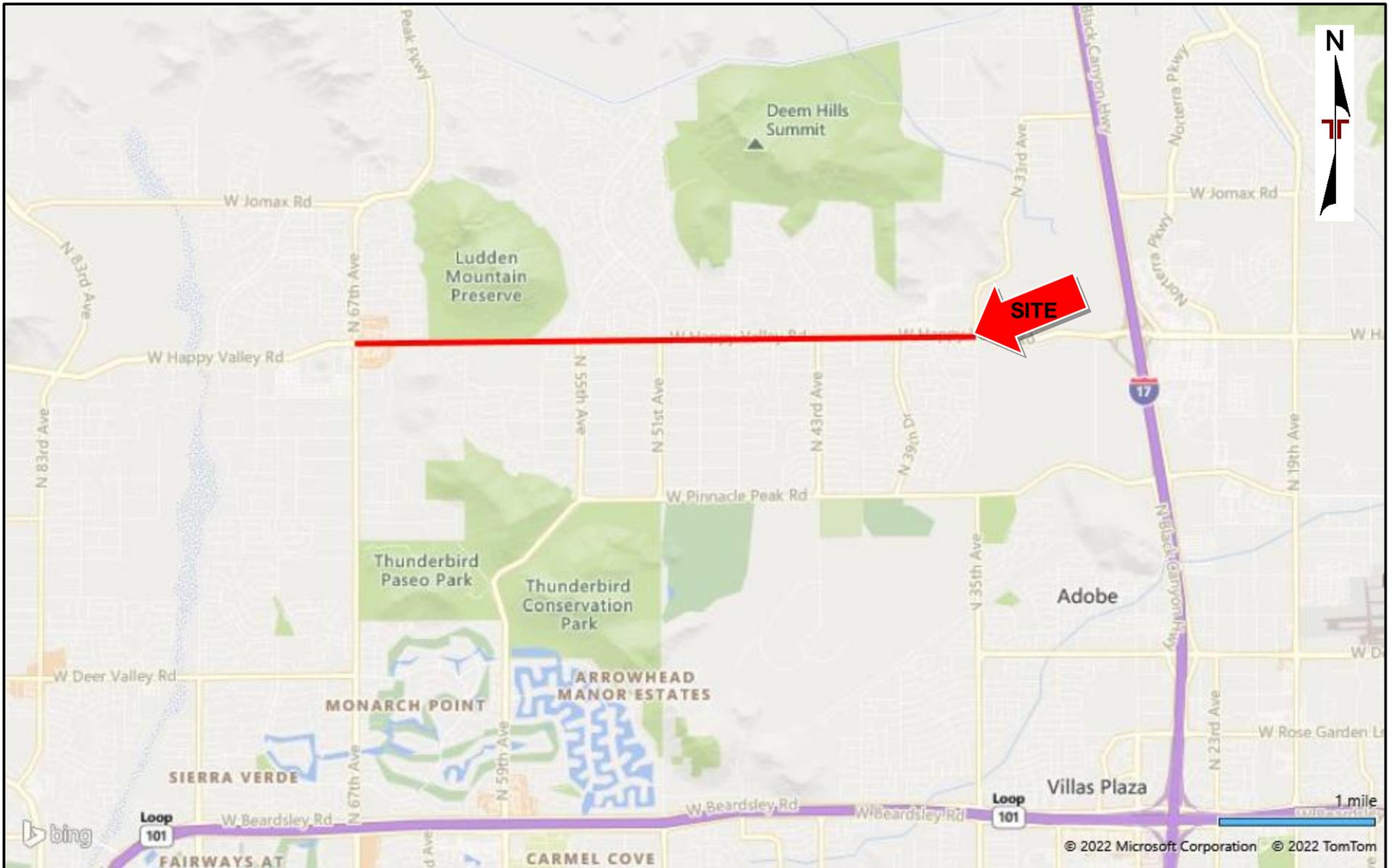
Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

APPENDIX A

FIELD EXPLORATION

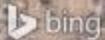


AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager: MRK	Project No. 65215140	 4685 S Ash Ave Ste H-4 Tempe, AZ 85282-6767
Drawn by: MRK	Scale: Not to Scale	
Checked by: RP	File Name: A-1-2	
Approved by: RP	Date: 02/18/22	

VICINITY MAP AND SITE LOCATION
Proposed Happy Valley Road Improvements 67 th Avenue to 35 th Avenue Phoenix, Arizona

Exhibit
A-1



© 2022 Microsoft Corporation © 2022 TomTom © Vexcel Imaging

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	MRK
Drawn by:	MRK
Checked by:	RP
Approved by:	RP

Project No.	65215140
Scale:	AS SHOWN
File Name:	A-1-2
Date:	02/18/22

Terracon

4685 S Ash Ave Ste H-4
Tempe, AZ 85282-6767

EXPLORATION PLAN

Proposed Happy Valley Road Improvements
67th Avenue to 35th Avenue
Phoenix, Arizona

Exhibit	A-2
---------	-----

Field Exploration Description

A total of 16 test borings drilled to depths ranging from approximately 4 to 5½ feet below the existing ground surface were completed between October 27 and November 1, 2021. The approximate boring locations are shown on the attached Exploration Plan, Exhibit A-2.

Boring Layout and Elevations: Terracon provided the proposed boring layout prior to the field exploration. Coordinates for each boring were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±15 feet). If elevations and a more precise boring layout are desired, we recommend the borings be surveyed.

Subsurface Exploration Procedures: The borings were advanced using a truck-mounted CME-55 drill rig utilizing 7-inch outside diameter hollow-stem augers. At selected intervals, samples of the subsurface materials were taken at each boring location by driving split-spoon (SPT) or ring-lined barrel samplers in general accordance with ASTM Standards. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. A 3-inch O.D. and 2.5-inch I.D. ring lined sampler was used for sampling in the soil borings. Ring-lined, split-barrel sampling procedures are similar to standard split spoon sampling procedure; however, blow counts are typically recorded for 6-inch intervals for a total of 12 inches of penetration. Bulk samples of subsurface materials were obtained from all the borings.

Groundwater was not encountered during drilling and sampling.

For safety purposes, the borings performed in the existing roadway were backfilled with auger cuttings mixed with fast setting cement. The borings performed on the pavement were patched with cold patch asphalt concrete immediately upon their completion.

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING				WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP) Hand Penetrometer
						Water Level After a Specified Period of Time		(T) Torvane
						Water Level After a Specified Period of Time		(b/f) Standard Penetration Test (blows per foot)
	<p style="text-align: center;">Bulk Shelby Tube Split Spoon</p> <p style="text-align: center;">Rock Core Macro Core Modified California Ring Sampler</p> <p style="text-align: center;">Grab Sample No Recovery Modified Dames & Moore Ring Sampler</p>				<p>Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.</p>			(OVA) Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS	RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 15
With	15 - 29
Modifier	> 30

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 5
With	5 - 12
Modifier	> 12

GRAIN SIZE TERMINOLOGY

<u>Major Component of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		
				Group Symbol	Group Name ^B	
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F	
			$Cu < 4$ and/or $1 > Cc > 3$ ^E	GP	Poorly graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}	
			Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}	
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I	
			$Cu < 6$ and/or $1 > Cc > 3$ ^E	SP	Poorly graded sand ^I	
		Sands with Fines: More than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G,H,I}	
			Fines classify as CL or CH	SC	Clayey sand ^{G,H,I}	
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K,L,M}	
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K,L,M}	
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K,L,M,N}
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,O}
		Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}
				PI plots below "A" line	MH	Elastic Silt ^{K,L,M}
	Organic:		Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K,L,M,P}
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,Q}
	Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat

^A Based on the material passing the 3-inch (75-mm) sieve

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$E \quad Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

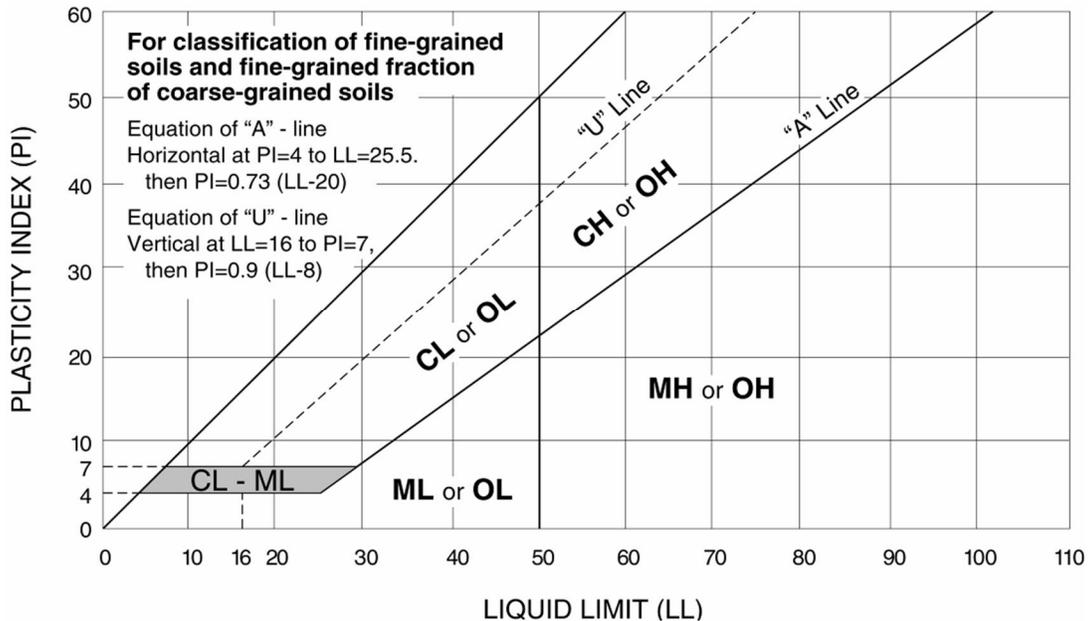
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



BORING LOG NO. R2

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7124° Longitude: -112.1979°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
	DEPTH							LL-PL-PI		
	ASPHALT CONCRETE , approximately 6 inches thick	0.5								
	AGGREGATE BASE COURSE , approximately 5 inches thick	0.9								
	CLAYEY SAND WITH GRAVEL (SC) , fine to medium sand, medium plasticity, light brown, very dense, weak cementation	1								
		2			50/2"	8.8	82			
		3						38-24-14	39	
		4								
		4.5			35-50/1"					
Boring Terminated at 4.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered



Boring Started: 11-01-2021

Boring Completed: 11-01-2021

Drill Rig: CME 45

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-6

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R3

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7123° Longitude: -112.1937°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
	DEPTH									
0.3	ASPHALT CONCRETE , approximately 4 inches thick									
0.8	AGGREGATE BASE COURSE , approximately 5 inches thick									
5.5	SANDY LEAN CLAY (CL) , trace gravel, fine to coarse sand, medium plasticity, brown, very stiff, weak cementation	1 2 3 4 5	12-14	11-10-12 N=22	8.1	119	37-19-18	52		
	Boring Terminated at 5.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered



Boring Started: 10-28-2021

Drill Rig: CME 55

Project No.: 65215140

Boring Completed: 10-28-2021

Driller: Southlands Engineering

Exhibit: A-7

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R4

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7123° Longitude: -112.1894°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
								LL-PL-PI	PERCENT FINES
	0.3 ASPHALT CONCRETE , approximately 3 inches thick								
	0.6 AGGREGATE BASE COURSE , approximately 4 inches thick								
	CLAYEY SAND (SC) , trace gravel, fine to coarse sand, medium plasticity, brown, medium dense, weak cementation	1			11-14	8.4	99		
	4.0 moderate cementation Boring Terminated at 4 Feet	2						39-18-21	43
		3							
		4			50/1"				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered



Boring Started: 10-28-2021

Boring Completed: 10-28-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-8

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_65215140 HAPPY VALLEY ROAD.GPJ TERRACON DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R5

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7124° Longitude: -112.1851°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
DEPTH									
0.4	ASPHALT CONCRETE , approximately 5 inches thick								
0.8	AGGREGATE BASE COURSE , approximately 5 inches thick								
4.5	SILTY SAND (SM) , trace gravel, fine to coarse sand, fine to coarse gravel, medium to high plasticity, tan, very dense, strong cementation	1							
		2	X		15-50/2"	13.6	84	61-34-27	38
		3							
		4	X		50/5"				
	Boring Terminated at 4.5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-28-2021

Boring Completed: 10-28-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-9

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R6

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7124° Longitude: -112.1808°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
DEPTH									
0.4	ASPHALT CONCRETE , approximately 5 inches thick								
1.1	AGGREGATE BASE COURSE , approximately 8 inches thick								
1.1	CLAYEY SAND WITH GRAVEL (SC) , fine to coarse sand, fine gravel, medium plasticity, brown, loose, weak cementation	1	↑						
5.5	light brown, dense to very dense, moderate cementation	2	X		5-6	7.3	98	41-19-22	33
5.5		3	X						
5.5		4	X						
5.5		5	X		10-20-31 N=51				
5.5	Boring Terminated at 5.5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-28-2021

Boring Completed: 10-28-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-10

BORING LOG NO. R7

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7125° Longitude: -112.1759°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
0.4	ASPHALT CONCRETE , approximately 5 inches thick									
0.8	AGGREGATE BASE COURSE , approximately 5 inches thick									
1.0	SANDY FAT CLAY (CH) , trace gravel, fine to coarse sand, fine to coarse gravel, high plasticity, brown, very stiff, weak cementation	1								
		2								
		3			8-21	12.3	111		59-25-34	52
		4								
	hard, moderate cementation	5			8-28-50/1"					
	5.0									
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

WATER LEVEL OBSERVATIONS
Groundwater not encountered

Notes:



Boring Started: 10-28-2021

Boring Completed: 10-28-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-11

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R8

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7126° Longitude: -112.1723°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
DEPTH									
	ASPHALT CONCRETE , approximately 6 inches thick	0.5							
	AGGREGATE BASE COURSE , approximately 7 inches thick	1.1							
	CLAYEY SAND (SC) , trace gravel, fine to coarse sand, fine to coarse gravel, medium plasticity, tan, medium dense, moderate cementation	1							
		2			19-21	5.1	105		
		3						43-21-22	40
	low plasticity, very dense, strong cementation, with gravel	4							
		5			13-16-50/4"				
	Boring Terminated at 5.5 Feet	5.5							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method: 7" O.D. Hollow Stem Auger	
Abandonment Method: Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt	
WATER LEVEL OBSERVATIONS Groundwater not encountered	

		Notes:	
Boring Started: 10-28-2021		Boring Completed: 10-28-2021	
Drill Rig: CME 55		Driller: Southlands Engineering	
Project No.: 65215140		Exhibit: A-12	

4685 S Ash Ave, Ste H-4
Tempe, AZ

BORING LOG NO. R9

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7125° Longitude: -112.1681°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
DEPTH									
0.4	ASPHALT CONCRETE , approximately 5 inches thick								
0.8	AGGREGATE BASE COURSE , approximately 5 inches thick								
5.5	SANDY LEAN CLAY (CL) , trace gravel, fine to coarse sand, medium plasticity, brown, stiff, weak to moderate cementation light brown, very stiff, weak cementation	1 2 3 4 5	▼ ▼ ▼ ▼ ▼		6-6 8-9-10 N=19	13.0	98	47-21-26	66
	Boring Terminated at 5.5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

WATER LEVEL OBSERVATIONS
Groundwater not encountered

Notes:



Boring Started: 11-01-2021

Boring Completed: 11-01-2021

Drill Rig: CME 45

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-13

BORING LOG NO. R10

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7125° Longitude: -112.1641°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
	DEPTH							LL-PL-PI	PERCENT FINES
0.7	ASPHALT CONCRETE , approximately 8 inches thick								
1.3	AGGREGATE BASE COURSE , approximately 8 inches thick	1							
5.5	CLAYEY SAND (SC) , trace gravel, fine to coarse sand, high plasticity, brown, medium dense, weak cementation light brown	2 3 4 5	↑		8-10 8-10-10 N=20	9.7	99	55-22-33	47
Boring Terminated at 5.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-28-2021

Boring Completed: 10-28-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-14

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R11

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7127° Longitude: -112.1598°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
	DEPTH								
0.4	ASPHALT CONCRETE , approximately 5 inches thick								
0.6	AGGREGATE BASE COURSE , approximately 2 inches thick								
5.5	CLAYEY SAND (SC) , trace gravel, fine to coarse sand, fine to coarse gravel, low plasticity, brown, loose, weak cementation medium plasticity, light tan, dense	1 2 3 4 5	↑		4-7 15-17-26 N=43	9.0	97	33-17-16	45
	Boring Terminated at 5.5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-27-2021

Boring Completed: 10-27-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-15

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R12

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7127° Longitude: -112.1557°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
	DEPTH							LL-PL-PI		
0.4	ASPHALT CONCRETE , approximately 5 inches thick									
0.6	AGGREGATE BASE COURSE , approximately 2 inches thick									
	SANDY LEAN CLAY (CL) , trace gravel, fine to coarse sand, medium plasticity, brown, stiff, weak cementation	1								
		2			5-12	15.7	102			
		3						47-19-28	59	
	light tan, hard	4								
		5			13-16-23 N=39					
	5.5									
Boring Terminated at 5.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

WATER LEVEL OBSERVATIONS
Groundwater not encountered

Notes:



Boring Started: 10-27-2021

Boring Completed: 10-27-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-16

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R13

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON DATATEMPLATE.GDT 2/14/22

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7127° Longitude: -112.1514°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
DEPTH									
	ASPHALT CONCRETE , approximately 6 inches thick								
	0.5 AGGREGATE BASE COURSE , approximately 6 inches thick								
	1.0 CLAYEY SAND WITH GRAVEL (SC) , fine to coarse sand, medium plasticity, brown, medium dense, moderate cementation	1	↑						
		2	X		7-12	14.3	107		
		3	X					28-17-11	35
		4	X						
		5	X		4-4-7 N=11				
	5.5 Boring Terminated at 5.5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered



Boring Started: 11-01-2021

Boring Completed: 11-01-2021

Drill Rig: CME 45

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-17

BORING LOG NO. R14

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7129° Longitude: -112.1471°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
	DEPTH							LL-PL-PI		
	0.3 ASPHALT CONCRETE , approximately 3.5 inches thick									
	0.6 AGGREGATE BASE COURSE , approximately 3.5 inches thick									
	SANDY LEAN CLAY WITH GRAVEL (CL) , fine to coarse sand, fine to coarse gravel, medium plasticity, light brown, stiff, weak cementation	1	2	3	4	5				
	brown, very stiff			6-10	14.8	96	48-19-29	51		
	5.5 Boring Terminated at 5.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-27-2021

Boring Completed: 10-27-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-18

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R15

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7128° Longitude: -112.1425°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	DEPTH								
	ASPHALT CONCRETE , approximately 7 inches thick	0.6							
	AGGREGATE BASE COURSE , approximately 5 inches thick	1.0							
	SANDY LEAN CLAY (CL) , trace gravel, fine to medium sand, medium plasticity, light brown, very stiff, moderate cementation	1			13-4	11.4	107		
		2							
		3						43-18-25	68
	hard, weak cementation	4							
		5			12-13-22 N=35				
	Boring Terminated at 5.5 Feet	5.5							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

Notes:

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 11-01-2021

Boring Completed: 11-01-2021

Drill Rig: CME 45

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-19

BORING LOG NO. R16

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7129° Longitude: -112.1385°	DEPTH	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
	ASPHALT CONCRETE , approximately 6.5 inches thick	0.0 - 0.6								
	AGGREGATE BASE COURSE , approximately 2.5 inches thick	0.6 - 0.8								
	SANDY FAT CLAY (CH) , trace gravel, fine to coarse sand, fine to coarse gravel, high plasticity, brown, very stiff, weak cementation	0.8 - 5.5								
	stiff				6-24	18.9	97	54-19-35	68	
					5-6-8 N=14					
	Boring Terminated at 5.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

WATER LEVEL OBSERVATIONS
Groundwater not encountered

Notes:



Boring Started: 10-27-2021

Boring Completed: 10-27-2021

Drill Rig: CME 55

Driller: Southlands Engineering

Project No.: 65215140

Exhibit: A-20

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

BORING LOG NO. R17

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

SITE: Happy Valley Road
Phoenix, Arizona

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 33.7128° Longitude: -112.1367°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
	DEPTH							LL-PL-PI	PERCENT FINES
	ASPHALT CONCRETE , approximately 4.5 inches thick	0.4							
	AGGREGATE BASE COURSE , approximately 4 inches thick	0.7							
	SANDY LEAN CLAY (CL) , trace gravel, fine to coarse sand, medium plasticity, brown, stiff, sample disturbed	1			7-3	10.3			
	hard	2						46-17-29	59
		3							
		4							
		5			9-13-23 N=36				
	Boring Terminated at 5.5 Feet	5.5							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
7" O.D. Hollow Stem Auger

Abandonment Method:
Boring backfilled with Auger Cuttings Mixed with Cement and Capped with Asphalt

WATER LEVEL OBSERVATIONS
Groundwater not encountered

Notes:



Boring Started: 10-27-2021

Boring Completed: 10-27-2021

Drill Rig: CME 55

Driller: Southlands Engineering

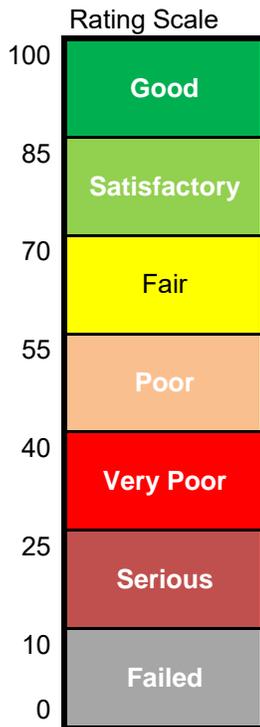
Project No.: 65215140

Exhibit: A-21

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 2/14/22

Asphalt Pavement Condition Summary

<u>Distress Type</u>	<u>Sum of Low, Medium, and High Deduct Values</u>		
	<u>R-2</u>	<u>R-3</u>	<u>R-4</u>
Alligator Cracking			
Block Cracking	5.8		
Depression			
Long & Tran Cracking	2.9	10.6	
Patching			
Potholes			
Rutting			
Weathering/Raveling			
Total Deduction =	9	11	
Weighted Deduction =	8	11	
PCI =	92	89	100
Rating	Good	Good	Good
Primary Cause(s) of Distress	A	A	A
Remedial Options	Short	1, 2	1, 2
	Long	5, 8	5, 8



Causes of Distress

- A. Age
- B. Subgrade Issues
- C. Pavement Thickness
- D. Drainage
- E. Excessive Loads

Remedial Option Alternatives

1. Clean and Seal Cracks
2. Fog Seal
3. Shallow AC patch
4. Full depth AC patch
5. Mill and overlay
6. Pulverize and overlay
7. Overlay
8. Remove and replace AC

Project Mngr. MRK	Project No. 65215140	 Consulting Engineers and Scientists 4685 South Ash Avenue, Suite H4 Tempe, AZ 85282 (480) 897-8200 (480) 897-1133	PCI Survey Summary	EXHIBIT
Drawn By: MRK	Scale As Shown		Happy Valley Road Improvements	A-22
Checked By: RP	File No.		Happy Valley Road from 67th Ave to 35th Ave	
Approved By: RP	Date: 12/29/2021		Phoenix, Arizona	

Asphalt Pavement Condition Summary

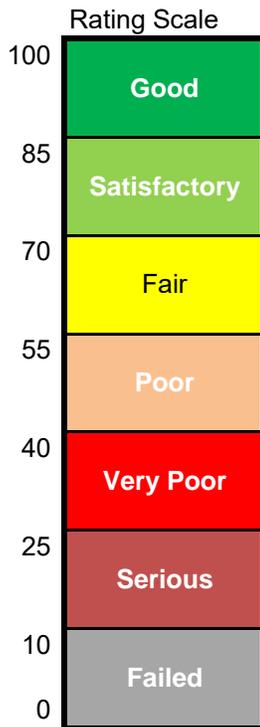
<u>Distress Type</u>	<u>Sum of Low, Medium, and High Deduct Values</u>		
	<u>R-5</u>	<u>R-6</u>	<u>R-7</u>
Alligator Cracking			
Block Cracking			17.4
Depression			
Long & Tran Cracking	26.2	13.2	
Patching	11.4		
Potholes			
Rutting			
Weathering/Raveling		3.1	5.0
Total Deduction =	38	16	22
Weighted Deduction =	29	15	19
PCI =	71	85	81
Rating	Satisfactory	Satisfactory	Satisfactory

Primary Cause(s) of Distress

A, C, E	A	A
---------	---	---

Remedial Options

Short	1, 3	1, 2	1, 2
Long	5, 8	5, 8	5, 8



Causes of Distress

- A. Age
- B. Subgrade Issues
- C. Pavement Thickness
- D. Drainage
- E. Excessive Loads

Remedial Option Alternatives

1. Clean and Seal Cracks
2. Fog Seal
3. Shallow AC patch
4. Full depth AC patch
5. Mill and overlay
6. Pulverize and overlay
7. Overlay
8. Remove and replace AC

Project Mngr. MRK	Project No. 65215140	 Consulting Engineers and Scientists 4685 South Ash Avenue, Suite H4 Tempe, AZ 85282 (480) 897-8200 (480) 897-1133	PCI Survey Summary	EXHIBIT
Drawn By: MRK	Scale As Shown		Happy Valley Road Improvements	A-23
Checked By: RP	File No.		Happy Valley Road From 67th Ave to 35th Ave	
Approved By: RP	Date: 10/28/2021		Phoenix, Arizona	

Asphalt Pavement Condition Summary

<u>Distress Type</u>	<u>Sum of Low, Medium, and High Deduct Values</u>		
	<u>R-8</u>	<u>R-9</u>	<u>R-10</u>
Alligator Cracking		35.5	
Block Cracking	8.8	21.2	31.2
Depression			
Long & Tran Cracking			
Patching			
Potholes			
Rutting			
Weathering/Raveling		5.0	5.7
Total Deduction =	9	62	37
Weighted Deduction =	9	45	33
PCI =	91	55	67
Rating	Good	Poor	Fair

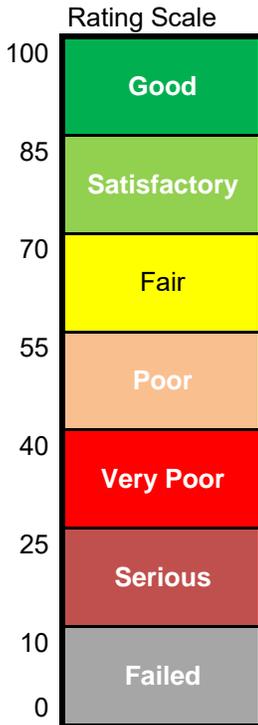
Primary Cause(s) of Distress

A	A, B, C, E	A
---	------------	---

Remedial Options

Short
Long

1, 3	1, 2	1, 3
5, 8	5, 8	5, 8



Causes of Distress

- A. Age
- B. Subgrade Issues
- C. Pavement Thickness
- D. Drainage
- E. Excessive Loads

Remedial Option Alternatives

1. Clean and Seal Cracks
2. Fog Seal
3. Shallow AC patch
4. Full depth AC patch
5. Mill and overlay
6. Pulverize and overlay
7. Overlay
8. Remove and replace AC

Asphalt Pavement Condition Summary

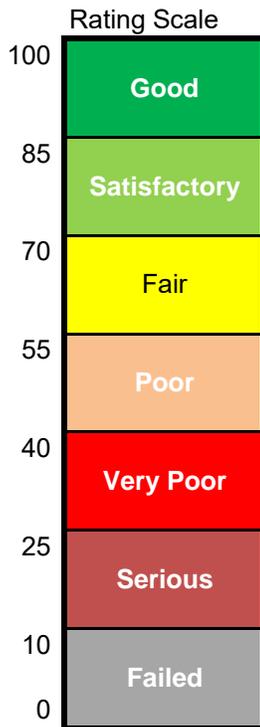
<u>Distress Type</u>	<u>Sum of Low, Medium, and High Deduct Values</u>		
	<u>R-11</u>	<u>R-12</u>	<u>R-13</u>
Alligator Cracking			
Block Cracking	29.0	29.0	29.0
Depression			
Long & Tran Cracking	8.4	6.3	
Patching			
Potholes			19.2
Rutting			
Weathering/Raveling	5.0	5.0	
Total Deduction =	42	40	48
Weighted Deduction =	33	33	37
PCI =	67	67	63
Rating	Fair	Fair	Fair

Primary Cause(s) of Distress

A, C, E	A, C, E	A, C, E
---------	---------	---------

Remedial Options

Short	1, 2	1, 2	1, 2
Long	5, 8	5, 8	5, 8



Causes of Distress

- A. Age
- B. Subgrade Issues
- C. Pavement Thickness
- D. Drainage
- E. Excessive Loads

Remedial Option Alternatives

- 1. Clean and Seal Cracks
- 2. Fog Seal
- 3. Shallow AC patch
- 4. Full depth AC patch
- 5. Mill and overlay
- 6. Pulverize and overlay
- 7. Overlay
- 8. Remove and replace AC

Project Mngr. MRK	Project No. 65215140	 Consulting Engineers and Scientists <small>4685 South Ash Avenue, Suite H4 Tempe, AZ 85282 (480) 897-8200 (480) 897-1133</small>	PCI Survey Summary	EXHIBIT
Drawn By: MRK	Scale As Shown		Happy Valley Road Improvements	A-25
Checked By: RP	File No.		Happy Valley Road From 67th Ave to 35th Ave	
Approved By: RP	Date: 12/27/2021		Phoenix, Arizona	

Asphalt Pavement Condition Summary

<u>Distress Type</u>	<u>Sum of Low, Medium, and High Deduct Values</u>		
	<u>R-14</u>	<u>R-15</u>	<u>R-16</u>
Alligator Cracking			
Block Cracking	29.0	19.1	
Depression			
Long & Tran Cracking	3.6	19.0	8.5
Patching		33.0	24.5
Potholes		26.9	
Rutting			
Weathering/Raveling	5.0	5.0	2.5
Total Deduction =	38	103	35
Weighted Deduction =	33	37	28
PCI =	67	63	72
Rating	Fair	Fair	Satisfactory

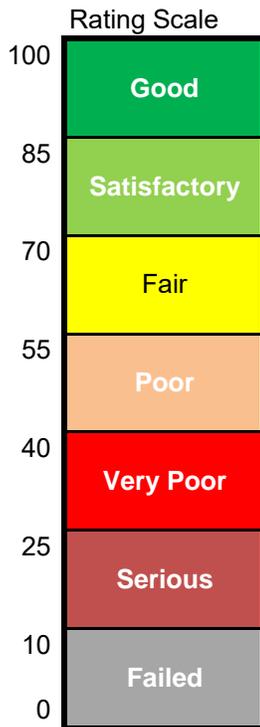
Primary Cause(s) of Distress

A	A, B	A
---	------	---

Remedial Options

Short
Long

1, 2	1, 2, 4	1, 2
5, 8	5, 8	5, 8



Causes of Distress

- A. Age
- B. Subgrade Issues
- C. Pavement Thickness
- D. Drainage
- E. Excessive Loads

Remedial Option Alternatives

- 1. Clean and Seal Cracks
- 2. Fog Seal
- 3. Shallow AC patch
- 4. Full depth AC patch
- 5. Mill and overlay
- 6. Pulverize and overlay
- 7. Overlay
- 8. Remove and replace AC

Project Mngr. MRK	Project No. 65215140	<p>Consulting Engineers and Scientists</p> <p>4685 South Ash Avenue, Suite H4 Tempe, AZ 85282 (480) 897-8200 (480) 897-1133</p>	PCI Survey Summary	EXHIBIT
Drawn By: MRK	Scale As Shown		Happy Valley Road Improvements	
Checked By: RP	File No.		Happy Valley Road From 67th Ave to 35th Ave	
Approved By: RP	Date: 10/27/2021		Phoenix, Arizona	
			A-26	

Asphalt Pavement Condition Summary

<u>Distress Type</u>	<u>Sum of Low, Medium, and High Deduct Values</u>
	<u>R-17</u>
Alligator Cracking	
Block Cracking	29.0
Depression	
Long & Tran Cracking	
Patching	
Potholes	
Rutting	
Weathering/Raveling	2.3
Total Deduction =	31
Weighted Deduction =	31

PCI =
Rating

69

Fair

Primary Cause(s) of Distress

A

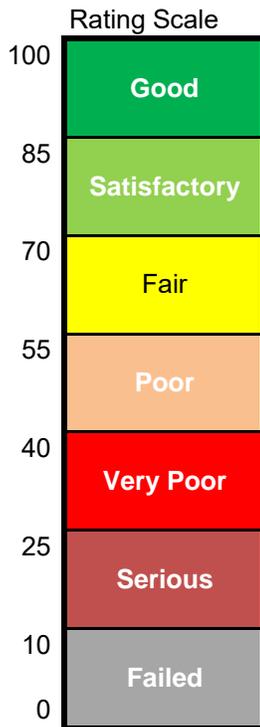
Remedial Options

Short

1, 2

Long

5, 8



Causes of Distress

- A. Age
- B. Subgrade Issues
- C. Pavement Thickness
- D. Drainage
- E. Excessive Loads

Remedial Option Alternatives

- 1. Clean and Seal Cracks
- 2. Fog Seal
- 3. Shallow AC patch
- 4. Full depth AC patch
- 5. Mill and overlay
- 6. Pulverize and overlay
- 7. Overlay
- 8. Remove and replace AC

Project Mngr.	MRK	Project No.	65215140	Terracon Consulting Engineers and Scientists	PCI Survey Summary	EXHIBIT
Drawn By:	MRK	Scale	As Shown		Happy Valley Road Improvements	
Checked By:	RP	File No.		<small>4685 South Ash Avenue, Suite H4 Tempe, AZ 85282 (480) 897-8200 (480) 897-1133</small>	Happy Valley Road From 67th Ave to 35th Ave	A-27
Approved By:	RP	Date:	10/27/2021		Phoenix, Arizona	

APPENDIX B

LABORATORY TESTING

Laboratory Testing

Samples retrieved during the field exploration were taken to the laboratory for further observation by the project geotechnical engineer and were classified in accordance with the Unified Soil Classification System (USCS) described in Exhibit A-5 in Appendix A. At that time, the field descriptions were confirmed or modified as necessary and an applicable laboratory testing program was formulated to determine engineering properties of the subsurface materials.

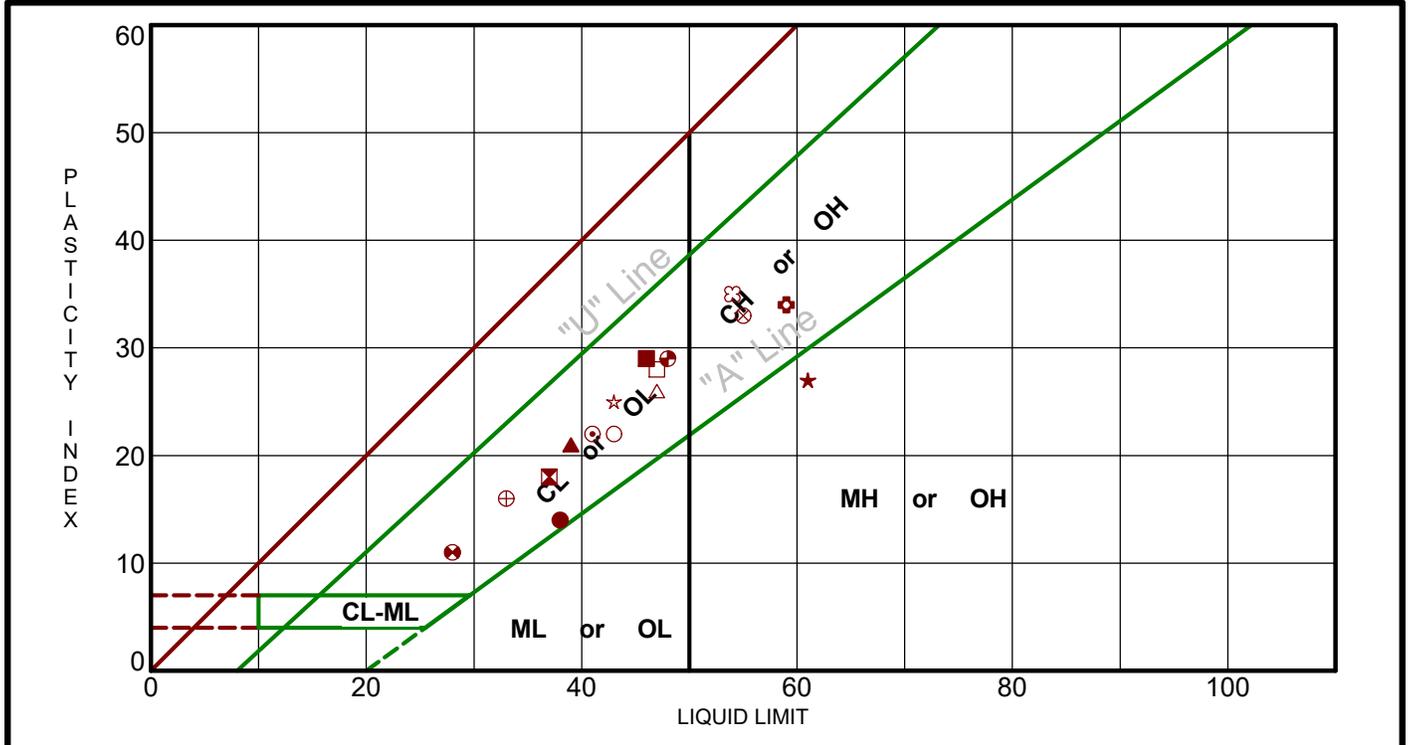
Laboratory tests were conducted on selected soil samples and the test results are presented in this appendix. The laboratory test results were used for the geotechnical engineering analyses, and the development of foundation recommendations. Laboratory tests were performed in general accordance with the applicable ASTM, local or other accepted standards.

Selected soil samples obtained from the site were tested for the following engineering properties:

- Atterberg Limits
- Moisture Content
- Standard Proctor
- R-Value
- Soluble Sulfates
- Sieve Analysis
- Density
- Remolded Swell
- pH & Resistivity
- Soluble Chlorides

ATTERBERG LIMITS RESULTS

ASTM D4318



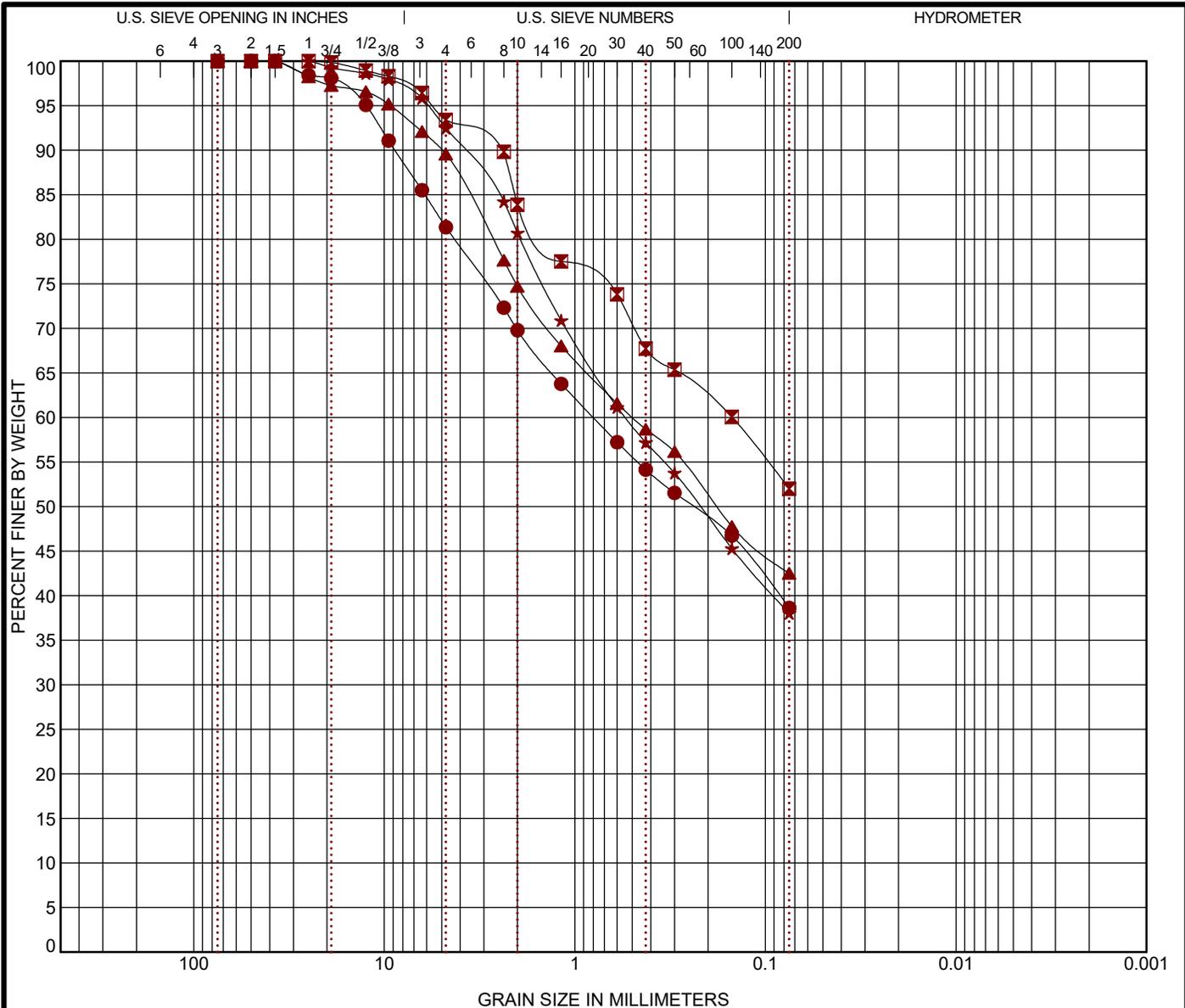
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 12/3/21

Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
⊕ R2	1 - 5	38	24	14	38.6	SC	CLAYEY SAND with GRAVEL
⊗ R3	0.8 - 5	37	19	18	52.0	CL	SANDY LEAN CLAY
△ R4	0.5 - 4	39	18	21	42.5	SC	CLAYEY SAND
★ R5	0.8 - 4.5	61	34	27	38.0	SM	SILTY SAND
⊕ R6	1.1 - 5	41	19	22	33.2	SC	CLAYEY SAND with GRAVEL
⊕ R7	0.8 - 5	59	25	34	51.5	CH	SANDY FAT CLAY
○ R8	1.1 - 5	43	21	22	40.0	SC	CLAYEY SAND
△ R9	1 - 5	47	21	26	66.4	CL	SANDY LEAN CLAY
⊗ R10	1.3 - 5	55	22	33	46.9	SC	CLAYEY SAND
⊕ R11	0.8 - 5	33	17	16	45.1	SC	CLAYEY SAND
□ R12	1 - 5	47	19	28	59.1	CL	SANDY LEAN CLAY
⊗ R13	1 - 5	28	17	11	35.4	SC	CLAYEY SAND with GRAVEL
⊕ R14	0.6 - 5	48	19	29	51.1	CL	SANDY LEAN CLAY with GRAVEL
★ R15	1 - 5	43	18	25	67.7	CL	SANDY LEAN CLAY
⊗ R16	1 - 5	54	19	35	68.4	CH	SANDY FAT CLAY
■ R17	0.7 - 5	46	17	29	59.4	CL	SANDY LEAN CLAY

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave	 4685 S Ash Ave, Ste H-4 Tempe, AZ	PROJECT NUMBER: 65215140
SITE: Happy Valley Road Phoenix, Arizona		CLIENT: Wilson & Company Inc Engineers & Architects Phoenix, Arizona
		EXHIBIT: B-2

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY			
	coarse	fine	coarse	medium	fine				

Boring ID	Depth	USCS Classification	AASHTO Classification	WC (%)	LL	PL	PI	Cc	Cu
● R2	1 - 5	CLAYEY SAND with GRAVEL (SC)	A-6 (2)		38	24	14		
■ R3	0.8 - 5	SANDY LEAN CLAY (CL)	A-6 (6)		37	19	18		
▲ R4	0.5 - 4	CLAYEY SAND (SC)	A-6 (5)		39	18	21		
★ R5	0.8 - 4.5	SILTY SAND (SM)	A-7-5 (5)		61	34	27		

Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Gravel	%Sand	%Silt	%Fines	%Clay
● R2	1 - 5	75	0.8			18.6	42.7		38.6	
■ R3	0.8 - 5	75	0.149			6.6	41.4		52.0	
▲ R4	0.5 - 4	75	0.497			10.4	47.1		42.5	
★ R5	0.8 - 4.5	75	0.542			7.5	54.5		38.0	

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS & AASHTO DESC COMBINED 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATA_TEMPLATE.GDT 12/3/21

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



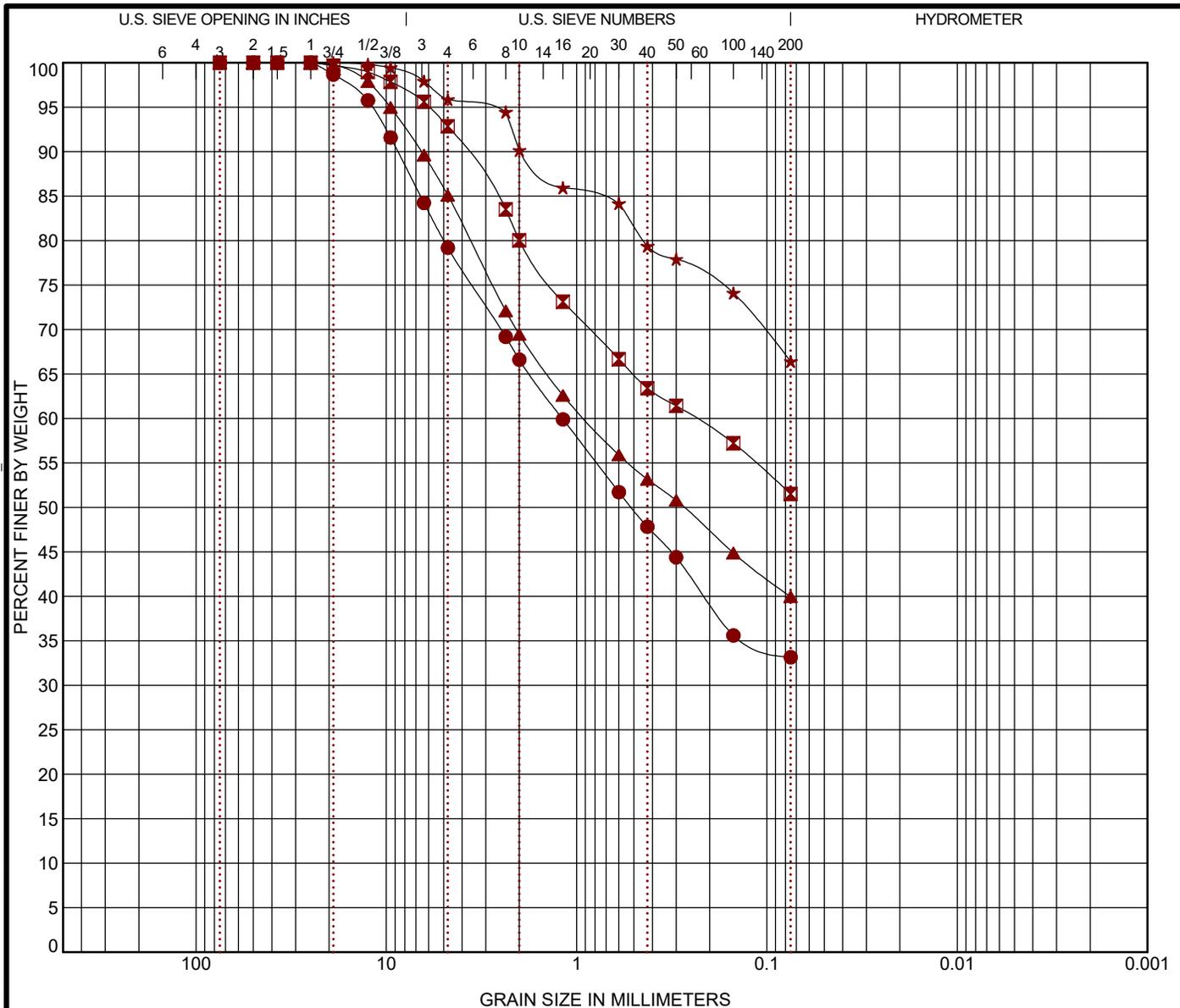
PROJECT NUMBER: 65215140

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-3

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY			
	coarse	fine	coarse	medium	fine				

Boring ID	Depth	USCS Classification	AASHTO Classification	WC (%)	LL	PL	PI	Cc	Cu
● R6	1.1 - 5	CLAYEY SAND with GRAVEL (SC)	A-2-7 (2)		41	19	22		
■ R7	0.8 - 5	SANDY FAT CLAY (CH)	A-7-6 (14)		59	25	34		
▲ R8	1.1 - 5	CLAYEY SAND (SC)	A-7-6 (4)		43	21	22		
★ R9	1 - 5	SANDY LEAN CLAY (CL)	A-7-6 (15)		47	21	26		

Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Gravel	%Sand	%Silt	%Fines	%Clay
● R6	1.1 - 5	75	1.19			20.8	46.0		33.2	
■ R7	0.8 - 5	75	0.237			7.2	41.3		51.5	
▲ R8	1.1 - 5	75	0.908			14.9	45.1		40.0	
★ R9	1 - 5	75				4.1	29.5		66.4	

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS & AASHTO DESC COMBINED 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATA_TEMPLATE.GDT 12/3/21

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



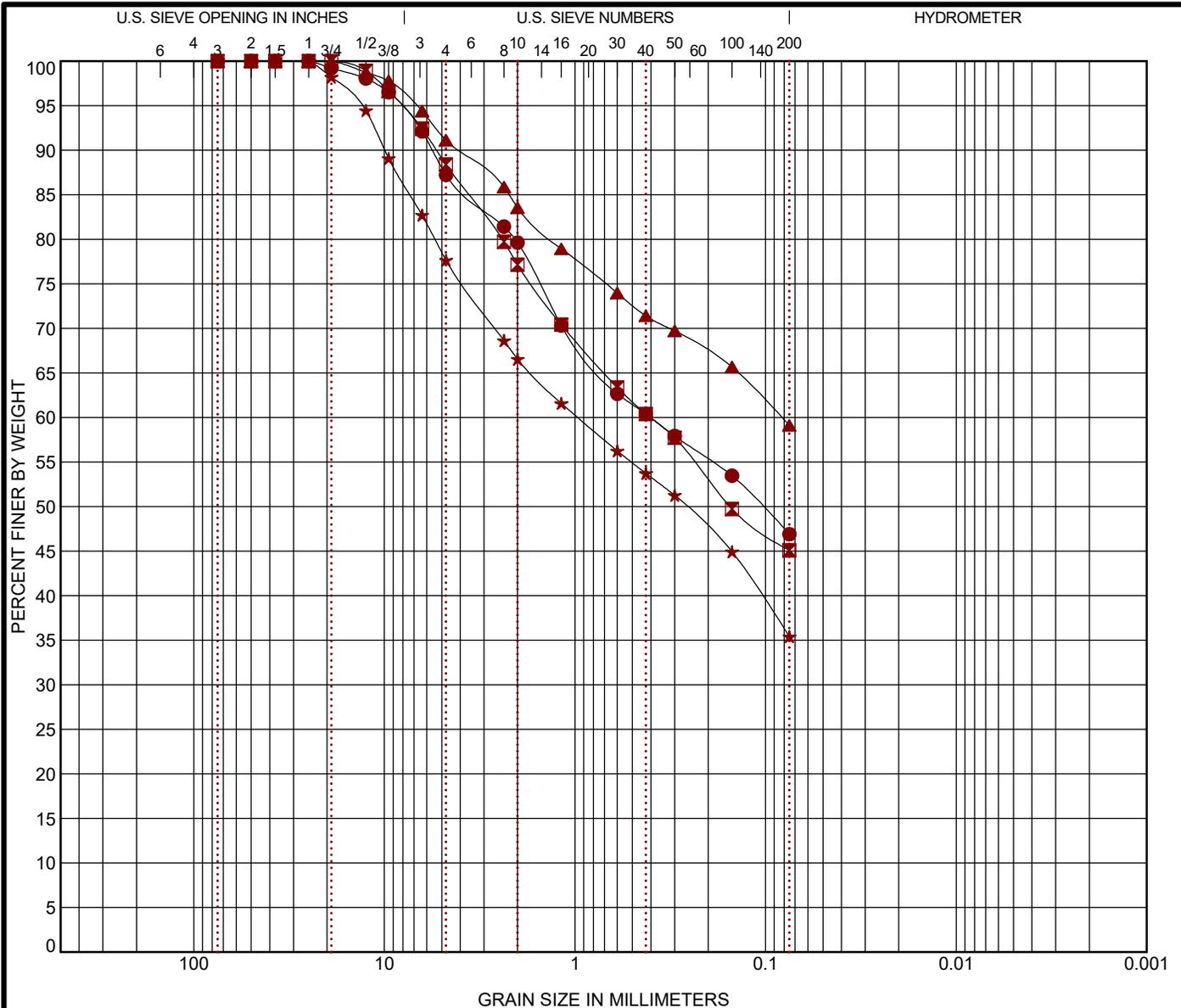
PROJECT NUMBER: 65215140

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-4

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY			
	coarse	fine	coarse	medium	fine				

Boring ID	Depth	USCS Classification	AASHTO Classification	WC (%)	LL	PL	PI	Cc	Cu
● R10	1.3 - 5	CLAYEY SAND (SC)	A-7-6 (11)		55	22	33		
■ R11	0.8 - 5	CLAYEY SAND (SC)	A-6 (3)		33	17	16		
▲ R12	1 - 5	SANDY LEAN CLAY (CL)	A-7-6 (14)		47	19	28		
★ R13	1 - 5	CLAYEY SAND with GRAVEL (SC)	A-2-6 (0)		28	17	11		

Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Gravel	%Sand	%Silt	%Fines	%Clay
● R10	1.3 - 5	75	0.402			12.8	40.3		46.9	
■ R11	0.8 - 5	75	0.403			11.6	43.3		45.1	
▲ R12	1 - 5	75	0.082			8.9	32.0		59.1	
★ R13	1 - 5	75	0.965			22.3	42.2		35.4	

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS & AASHTO DESC COMBINED 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATA_TEMPLATE.GDT 12/3/21

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



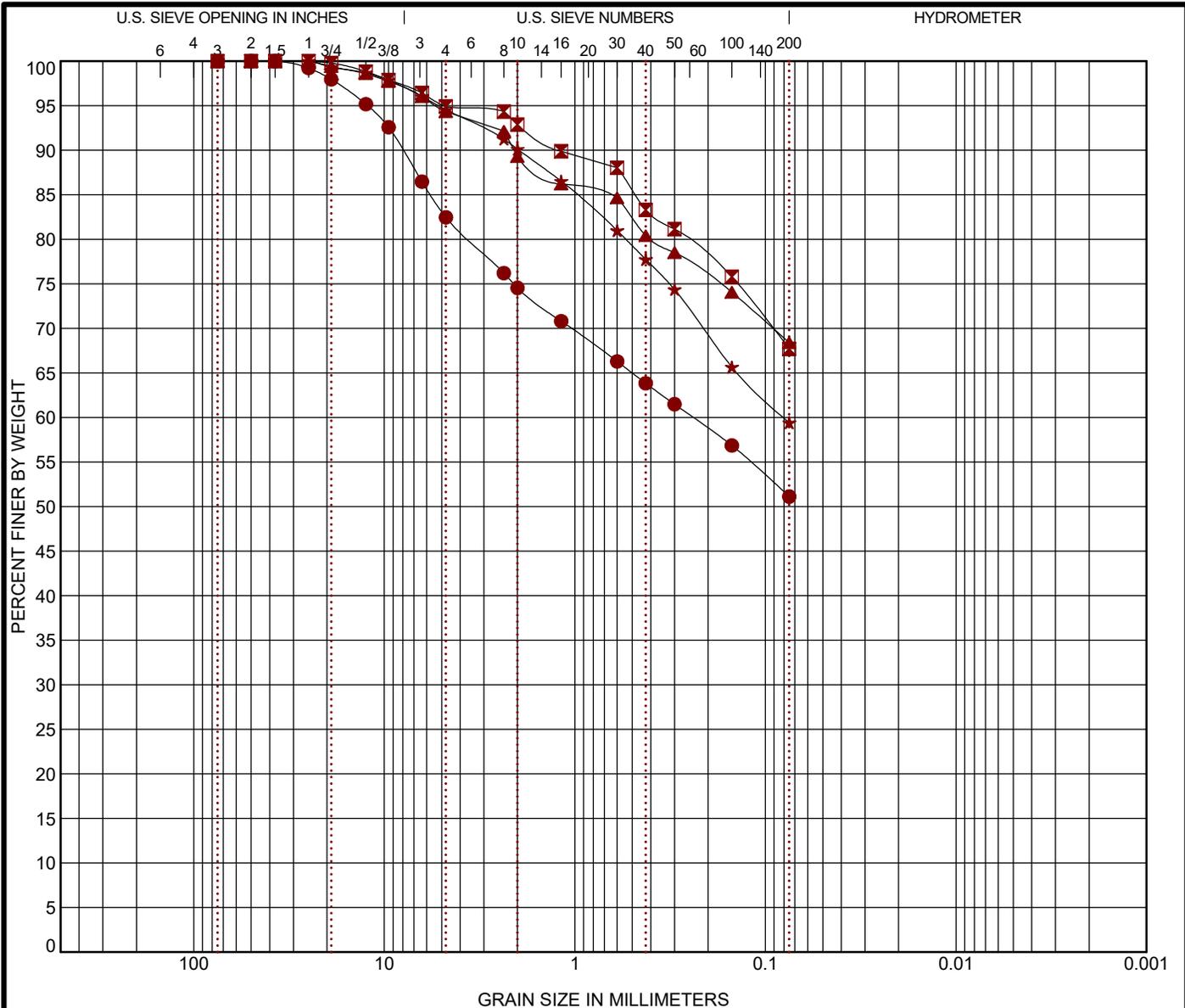
PROJECT NUMBER: 65215140

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-5

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY			
	coarse	fine	coarse	medium	fine				

Boring ID	Depth	USCS Classification	AASHTO Classification	WC (%)	LL	PL	PI	Cc	Cu
● R14	0.6 - 5	SANDY LEAN CLAY with GRAVEL (CL)	A-7-6 (11)		48	19	29		
☒ R15	1 - 5	SANDY LEAN CLAY (CL)	A-7-6 (15)		43	18	25		
▲ R16	1 - 5	SANDY FAT CLAY (CH)	A-7-6 (22)		54	19	35		
★ R17	0.7 - 5	SANDY LEAN CLAY (CL)	A-7-6 (14)		46	17	29		

Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Gravel	%Sand	%Silt	%Fines	%Clay
● R14	0.6 - 5	75	0.24			17.5	31.3		51.1	
☒ R15	1 - 5	75				5.1	27.2		67.7	
▲ R16	1 - 5	75				5.7	25.9		68.4	
★ R17	0.7 - 5	75	0.08			5.5	35.1		59.4	

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS & AASHTO DESC COMBINED 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATA_TEMPLATE.GDT 12/3/21

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

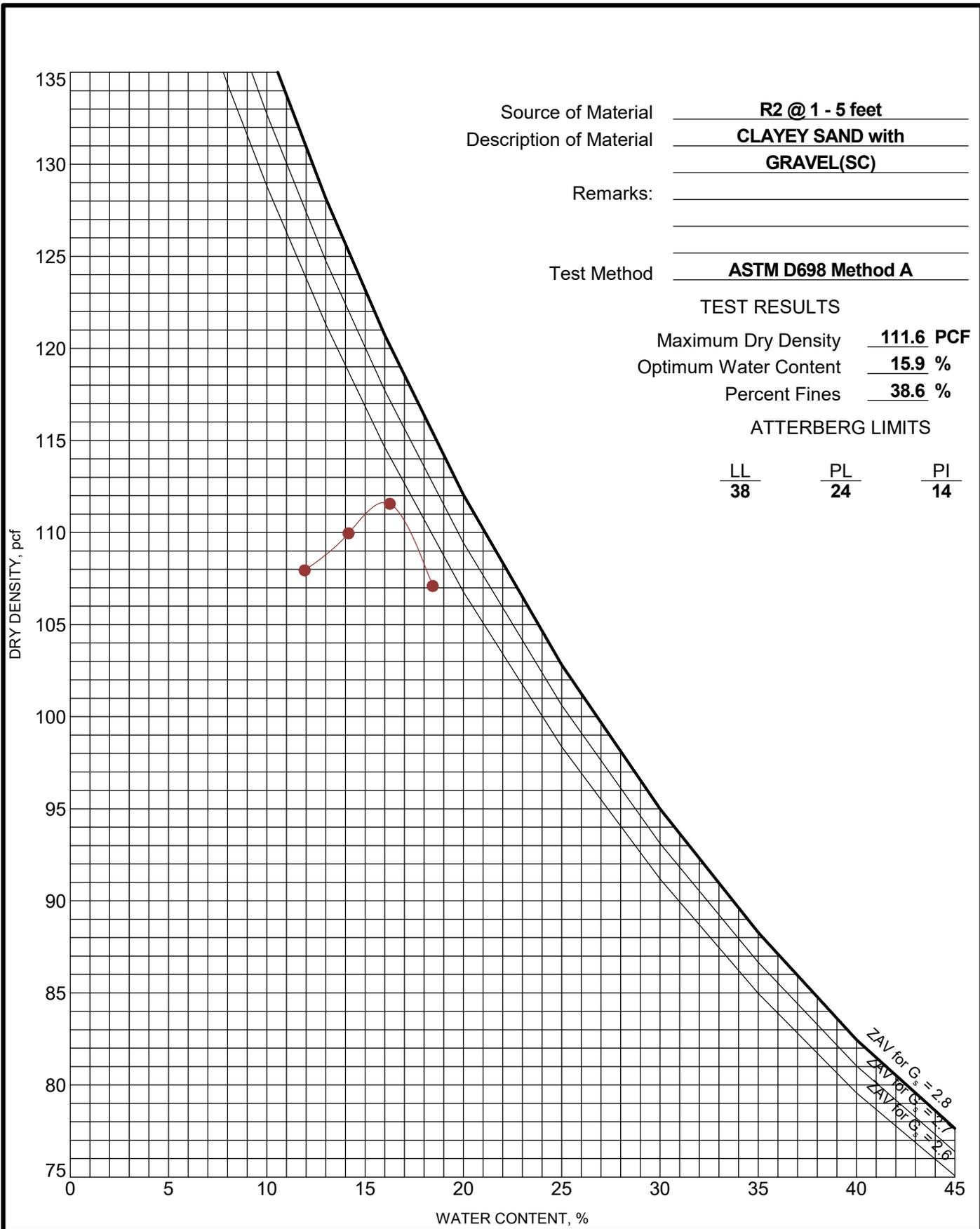
CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-6

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 12/3/21



Source of Material R2 @ 1 - 5 feet
 Description of Material CLAYEY SAND with GRAVEL(SC)
 Remarks: _____
 Test Method ASTM D698 Method A

TEST RESULTS
 Maximum Dry Density 111.6 PCF
 Optimum Water Content 15.9 %
 Percent Fines 38.6 %
 ATTERBERG LIMITS
 LL 38 PL 24 PI 14

PROJECT: Happy Valley Road Improvements-67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

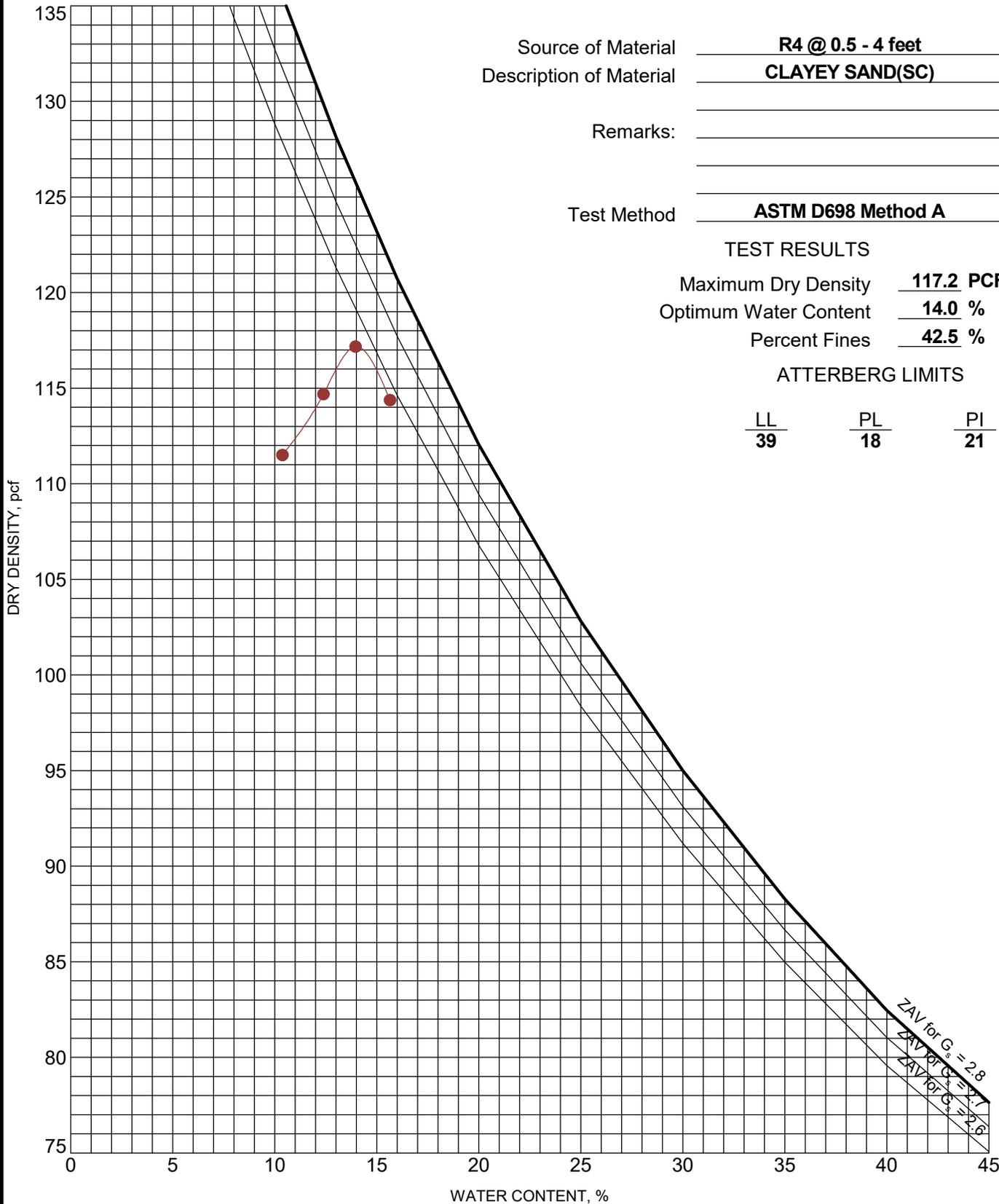
CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-7

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 12/3/21



Source of Material R4 @ 0.5 - 4 feet
 Description of Material CLAYEY SAND(SC)
 Remarks: _____
 Test Method ASTM D698 Method A

TEST RESULTS

Maximum Dry Density 117.2 PCF
 Optimum Water Content 14.0 %
 Percent Fines 42.5 %

ATTERBERG LIMITS

LL PL PI
39 **18** **21**

ZAV for G_s = 2.8
 ZAV for G_s = 2.65
 ZAV for G_s = 2.5

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

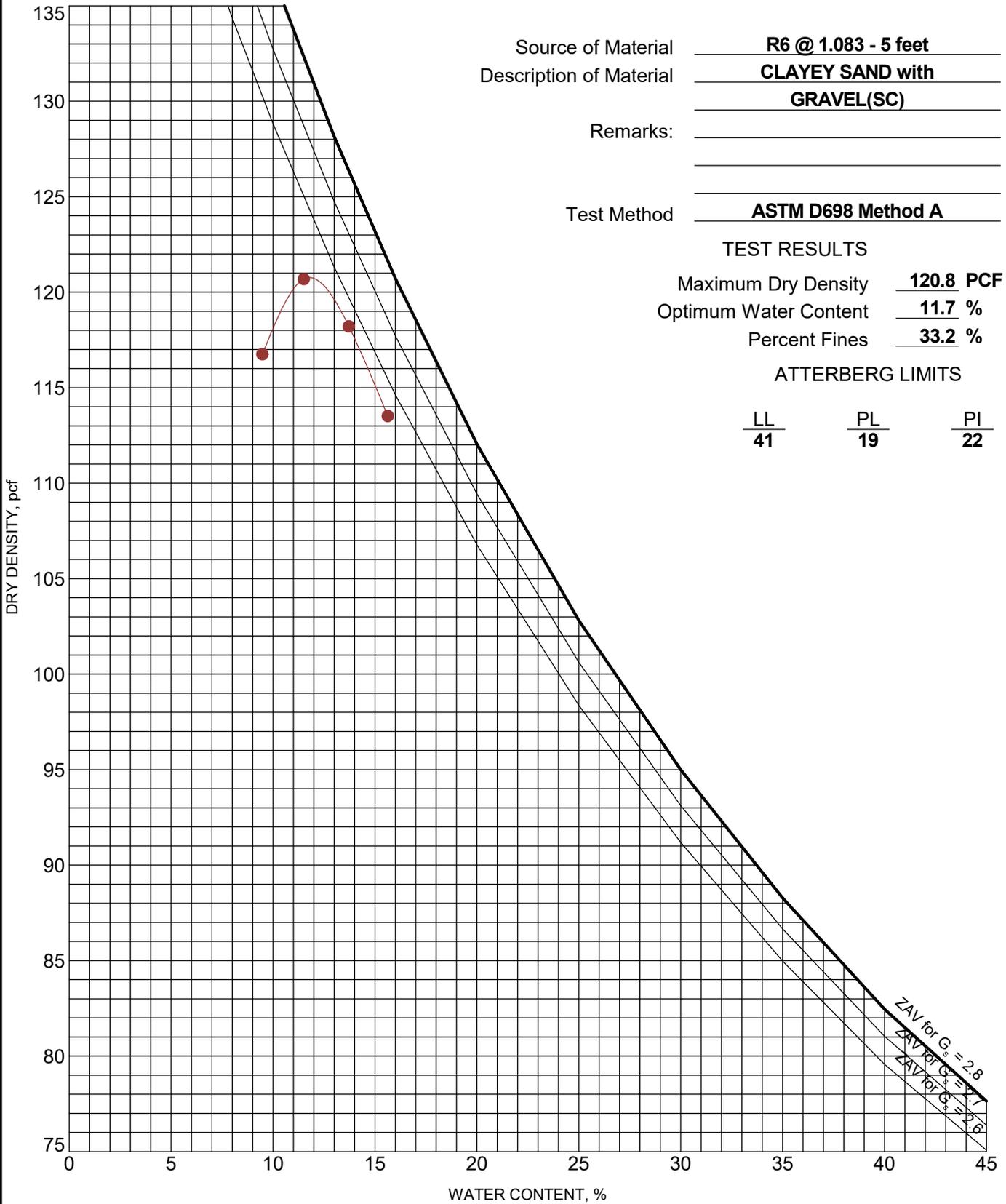
CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-8

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON DATATEMPLATE.GDT 12/3/21



Source of Material R6 @ 1.083 - 5 feet
 Description of Material CLAYEY SAND with GRAVEL(SC)
 Remarks: _____
 Test Method ASTM D698 Method A

TEST RESULTS

Maximum Dry Density 120.8 PCF
 Optimum Water Content 11.7 %
 Percent Fines 33.2 %

ATTERBERG LIMITS

LL PL PI
41 19 22

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

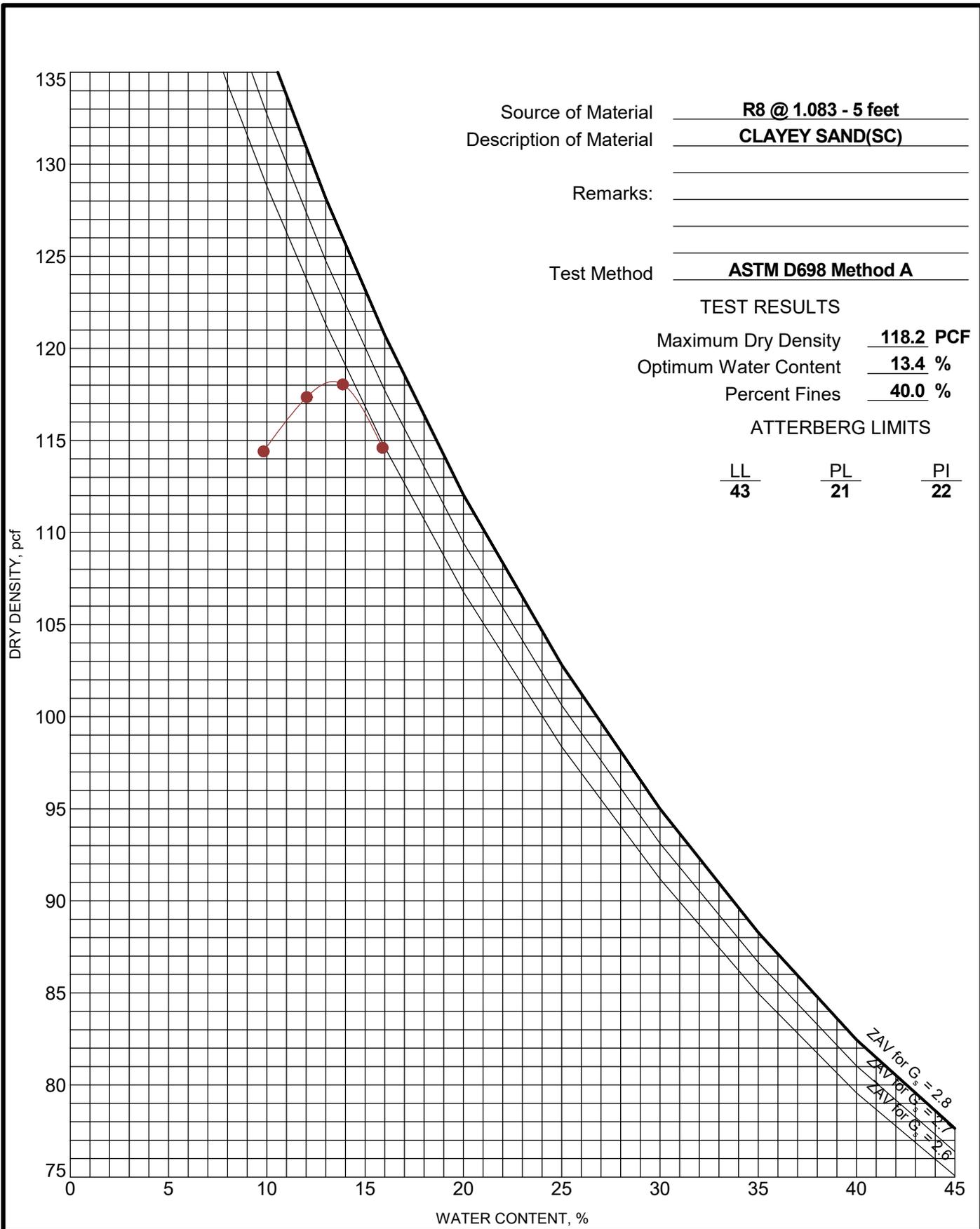
CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-9

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATA TEMPLATE.GDT 12/3/21



Source of Material R8 @ 1.083 - 5 feet
 Description of Material CLAYEY SAND(SC)
 Remarks: _____
 Test Method ASTM D698 Method A

TEST RESULTS
 Maximum Dry Density 118.2 PCF
 Optimum Water Content 13.4 %
 Percent Fines 40.0 %
 ATTERBERG LIMITS
 LL 43 PL 21 PI 22

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

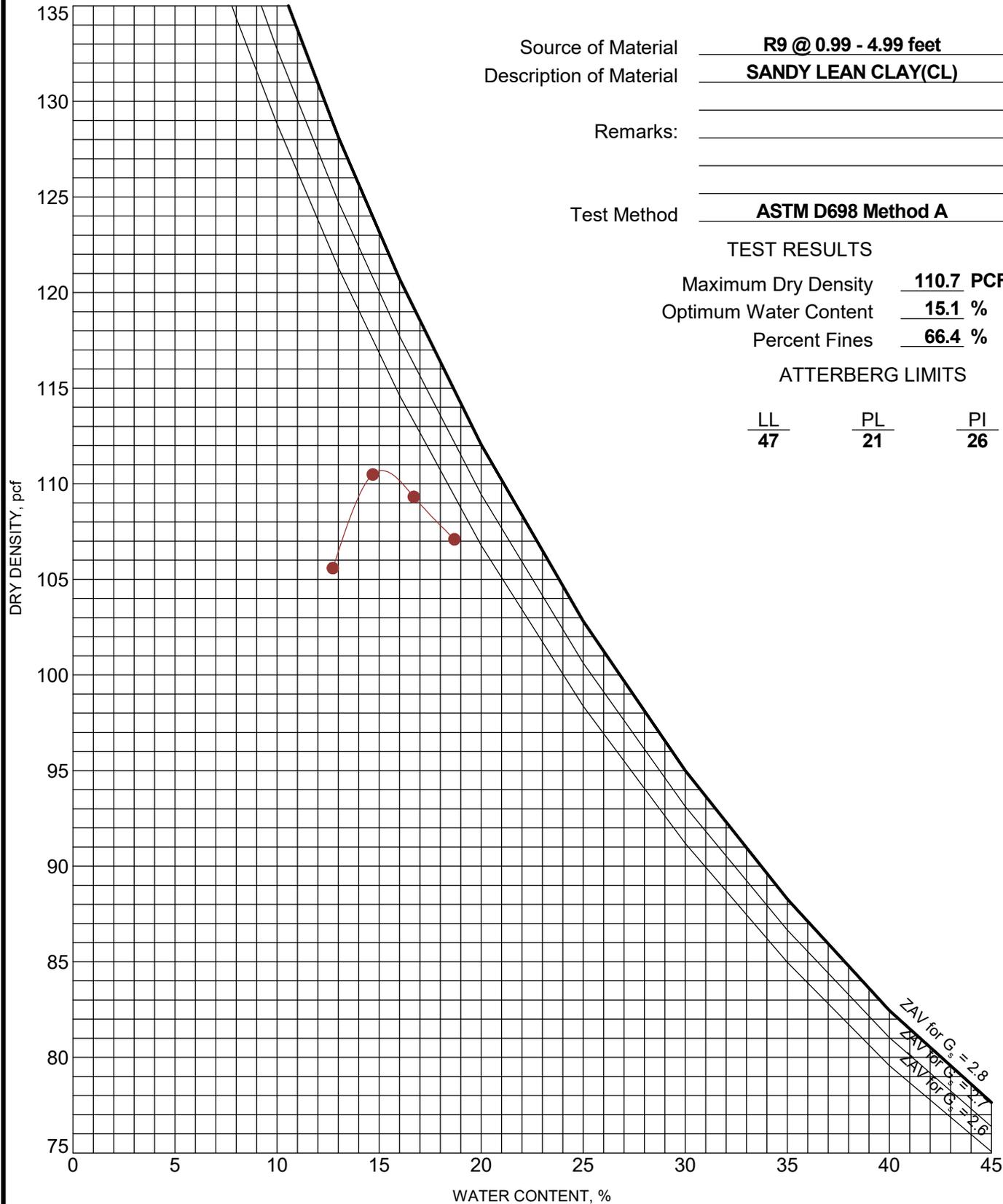
CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-10

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 12/3/21



Source of Material R9 @ 0.99 - 4.99 feet
 Description of Material SANDY LEAN CLAY(CL)

Remarks: _____

Test Method ASTM D698 Method A

TEST RESULTS

Maximum Dry Density 110.7 PCF
 Optimum Water Content 15.1 %
 Percent Fines 66.4 %

ATTERBERG LIMITS

LL PL PI
47 21 26

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

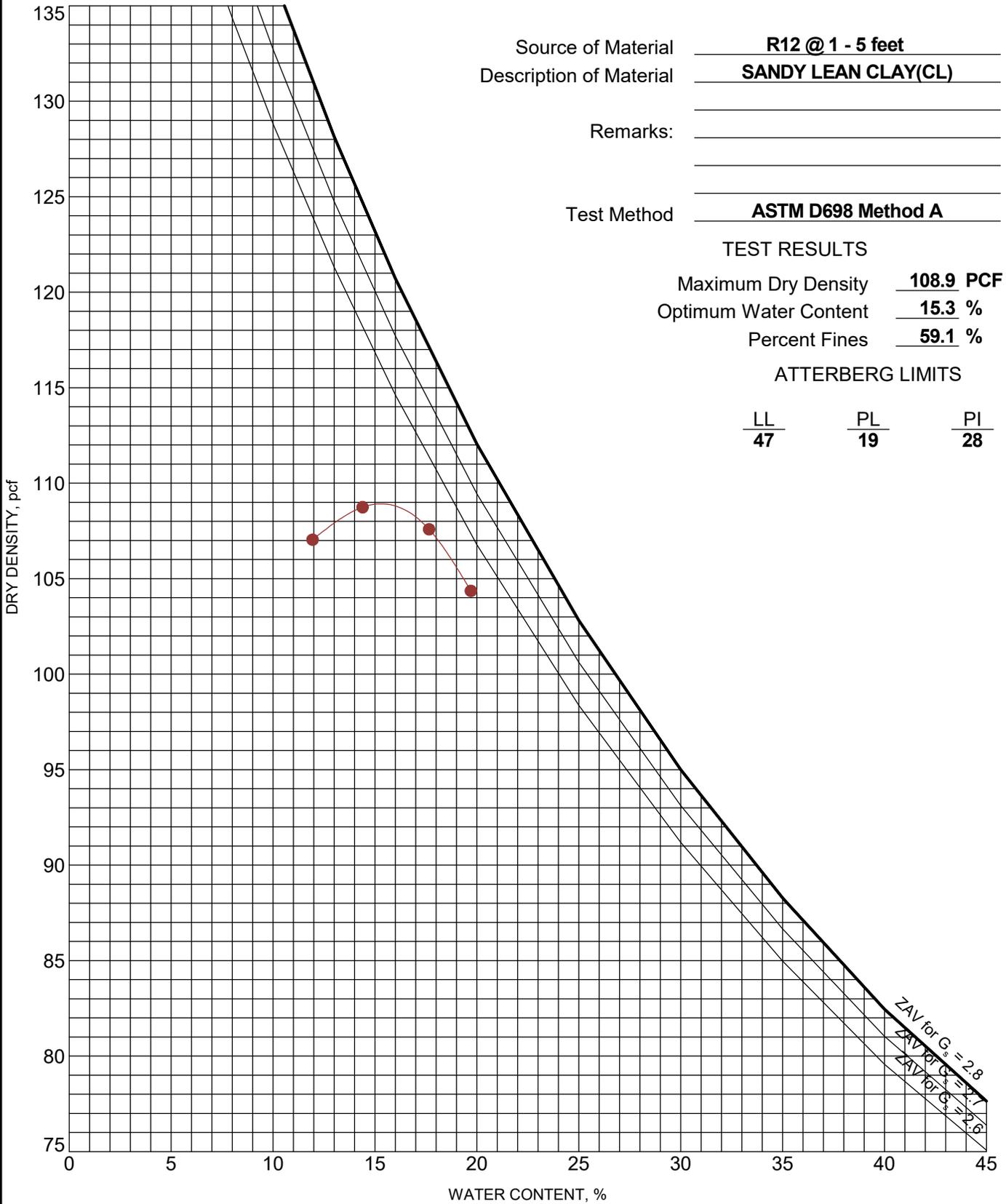
CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-11

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATA TEMPLATE.GDT 12/3/21



Source of Material R12 @ 1 - 5 feet
 Description of Material SANDY LEAN CLAY(CL)
 Remarks: _____
 Test Method ASTM D698 Method A

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

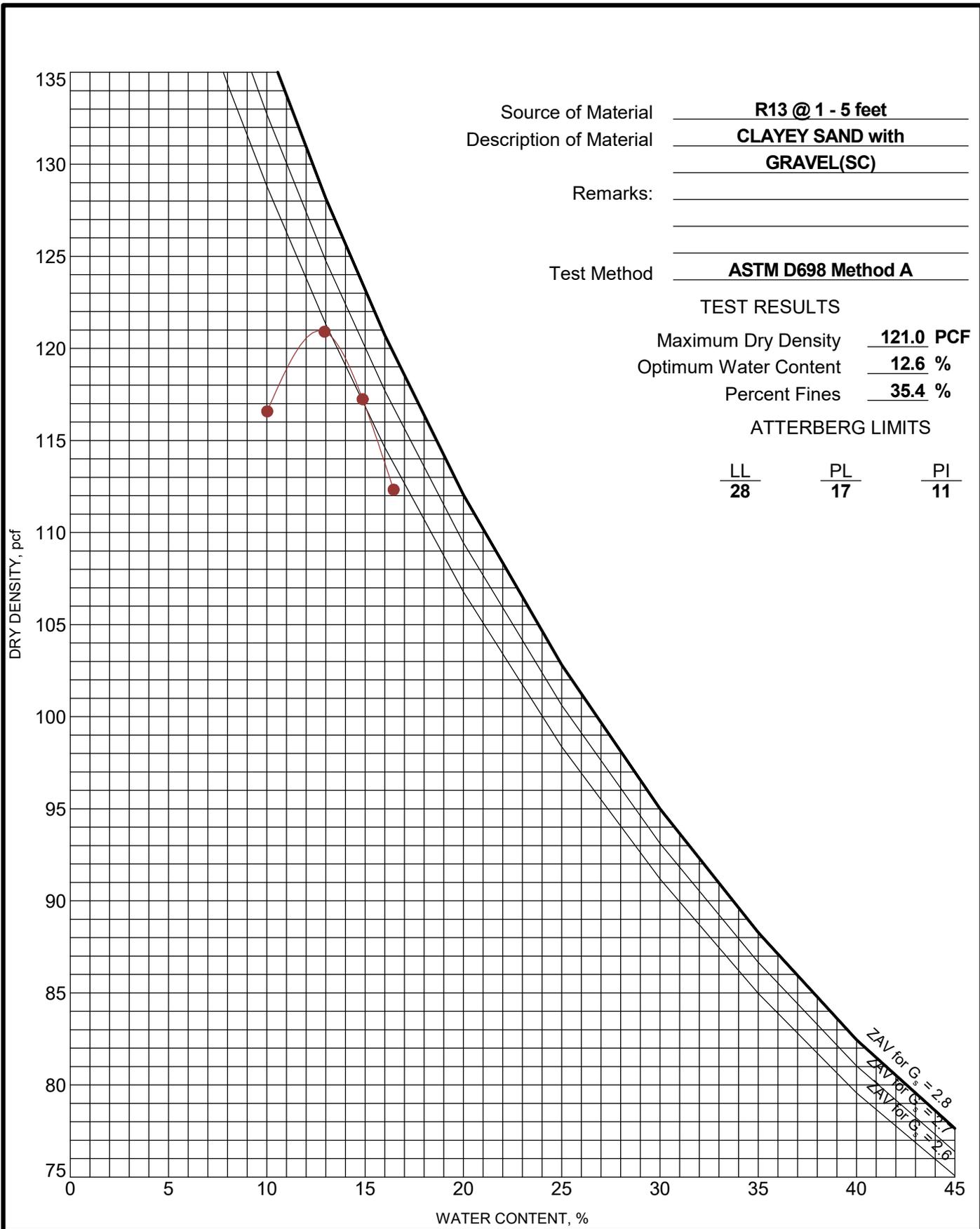
CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-12

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON DATATEMPLATE.GDT 12/3/21



Source of Material R13 @ 1 - 5 feet
 Description of Material CLAYEY SAND with GRAVEL(SC)
 Remarks: _____
 Test Method ASTM D698 Method A

TEST RESULTS
 Maximum Dry Density 121.0 PCF
 Optimum Water Content 12.6 %
 Percent Fines 35.4 %
 ATTERBERG LIMITS
 LL 28 PL 17 PI 11

PROJECT: Happy Valley Road Improvements-67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

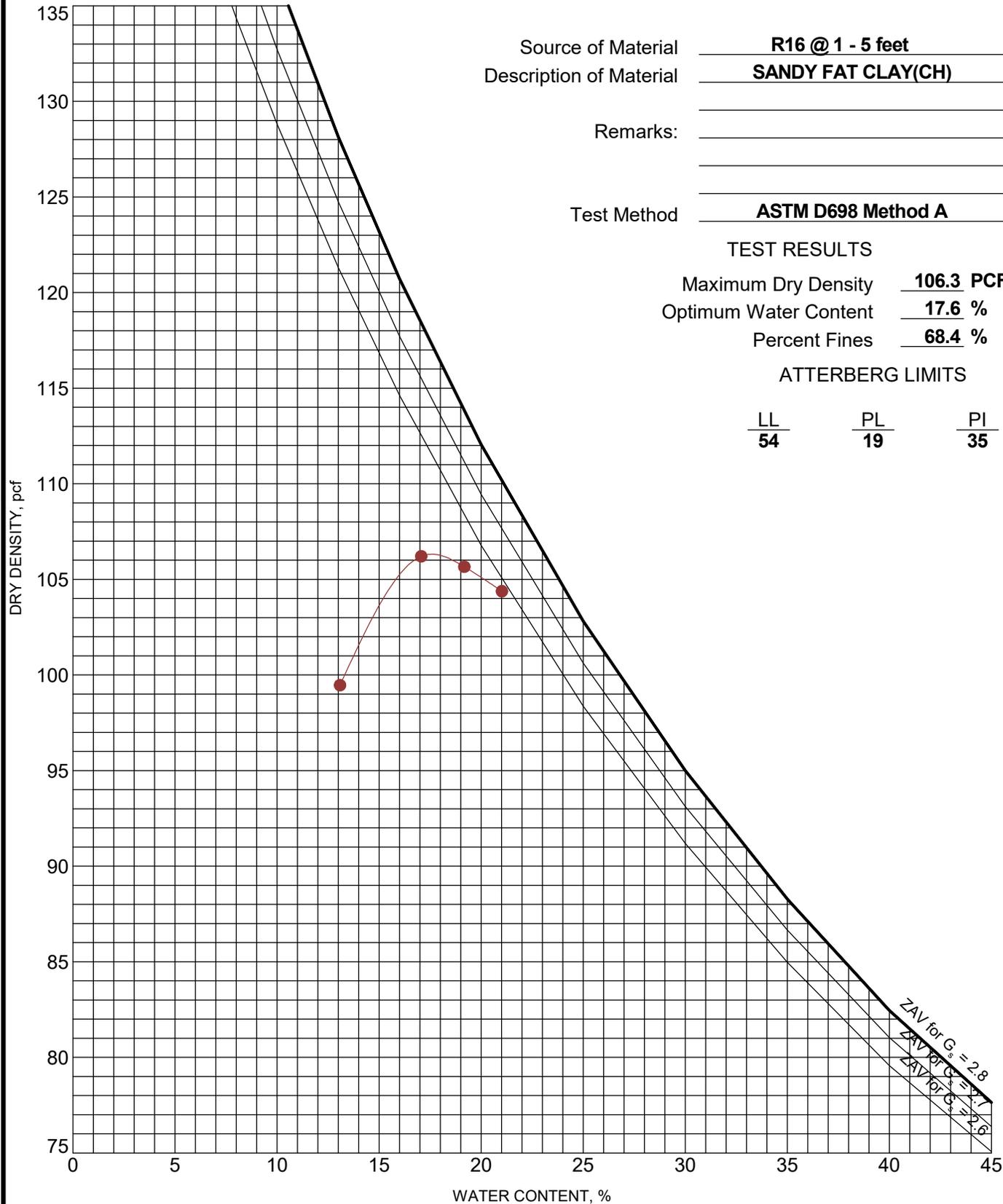
CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

EXHIBIT: B-13

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON_DATATEMPLATE.GDT 12/3/21



Source of Material R16 @ 1 - 5 feet
 Description of Material SANDY FAT CLAY(CH)
 Remarks: _____
 Test Method ASTM D698 Method A

TEST RESULTS

Maximum Dry Density 106.3 PCF
 Optimum Water Content 17.6 %
 Percent Fines 68.4 %

ATTERBERG LIMITS

LL PL PI
54 19 35

ZAV for G_s = 2.8
 ZAV for G_s = 2.65
 ZAV for G_s = 2.5

PROJECT: Happy Valley Road Improvements-
67th Ave to 35th Ave

SITE: Happy Valley Road
Phoenix, Arizona



PROJECT NUMBER: 65215140

CLIENT: Wilson & Company Inc Engineers & Architects
Phoenix, Arizona

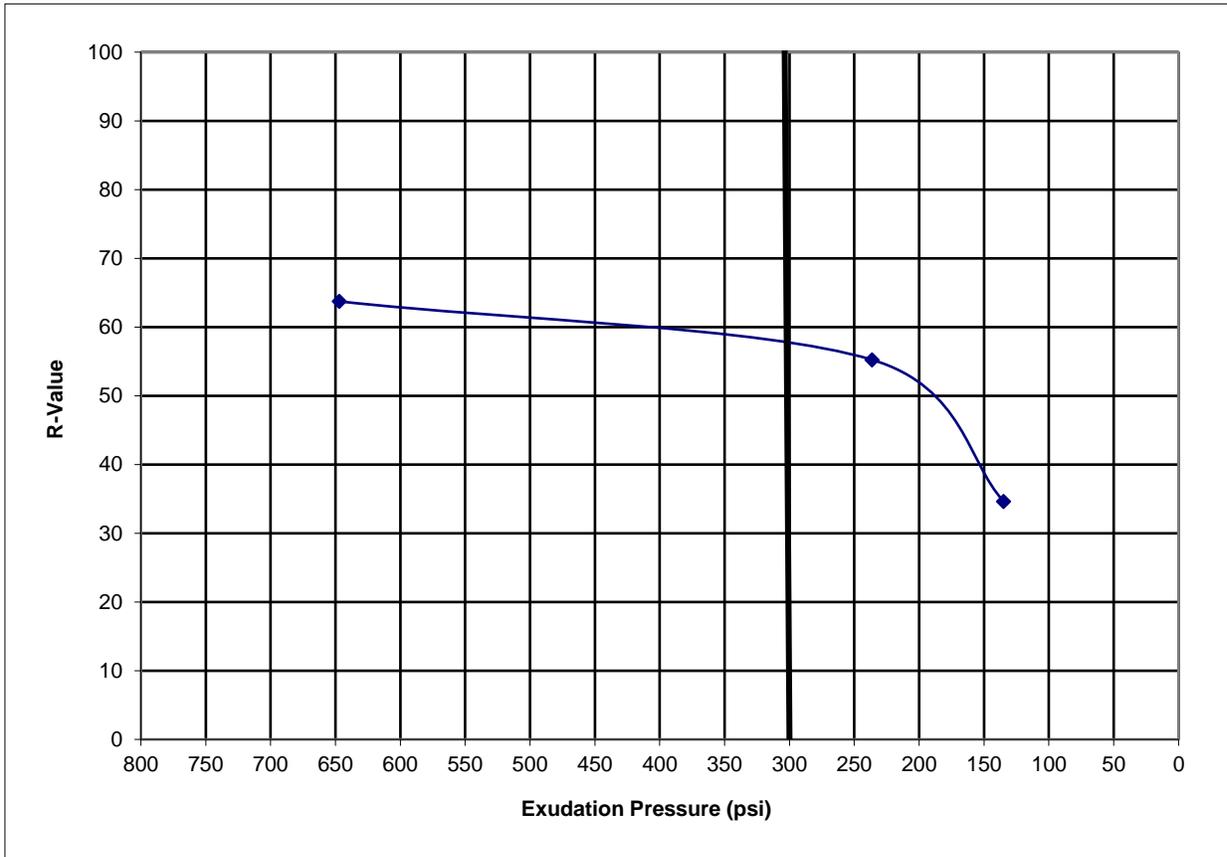
EXHIBIT: B-14

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave
LOCATION: Phoenix, AZ
MATERIAL: Clayey Sand with Gravel
SAMPLE SOURCE: R-2 @ 1-5

JOB NO: 65215140
WORK ORDER NO: 65215140
LAB NO: R-2 @ 1-5
DATE RECEIVED: 11/05/21

RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	16.9%	16.0%	15.1%
Compaction Pressure (psi)	75	125	200
Specimen Height (inches)	2.52	2.52	2.53
Dry Density (pcf)	117.5	118.7	120.2
Horiz. Pres. @ 1000lbs (psi)	31.0	23.0	16.0
Horiz. Pres. @ 2000lbs (psi)	86.0	49.0	32.0
Displacement	4.06	4.59	5.69
Expansion Pressure (psi)	0.0	0.0	0.0
Exudation Pressure (psi)	135	236	647
R Value	35	55	64



R Value at 300 PSI = 64

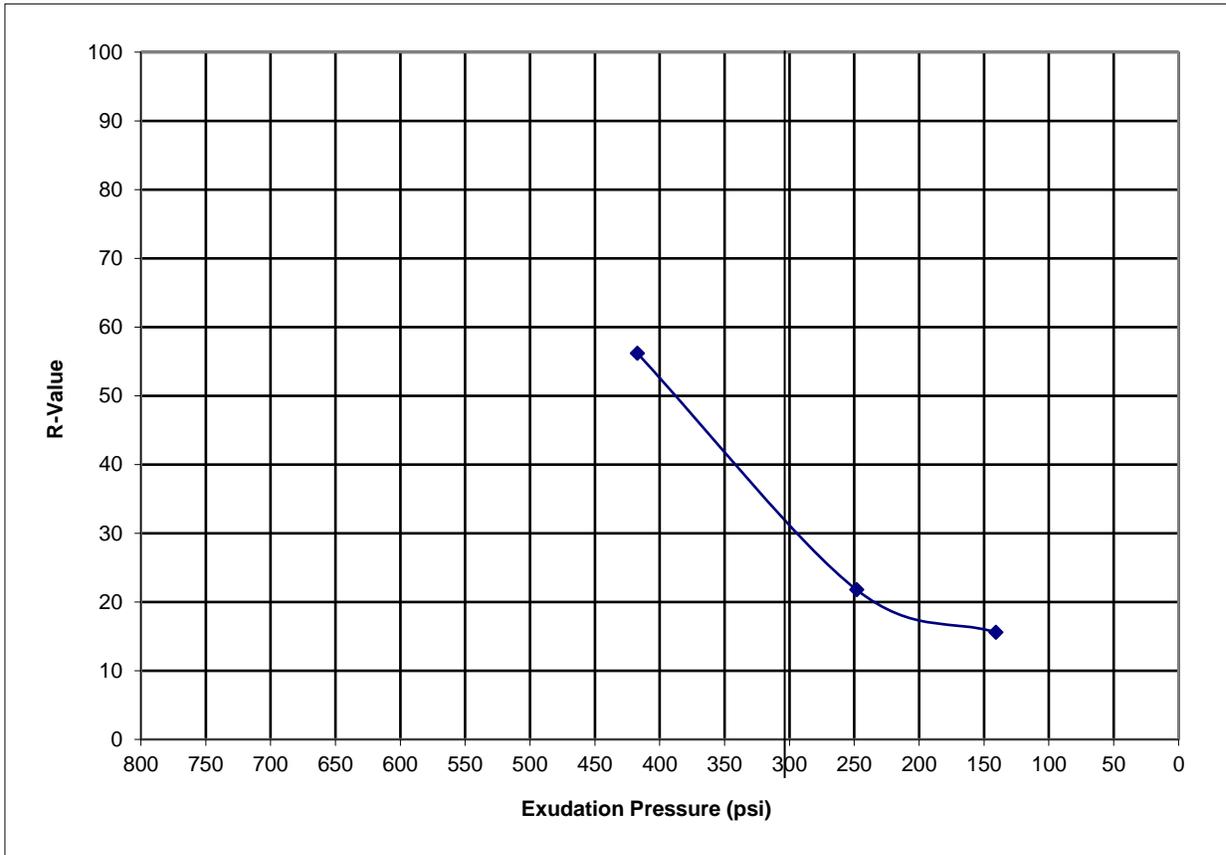
PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave
LOCATION: Phoenix, AZ
MATERIAL: Clayey Sand
SAMPLE SOURCE: R-4 @ 0.5-4

JOB NO: 65215140
WORK ORDER NO: 65215140
LAB NO: R-4 @ 0.6-5
DATE RECEIVED: 11/03/21

RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	16.3%	14.5%	12.6%
Compaction Pressure (psi)	*	75	200
Specimen Height (inches)	2.47	2.47	2.43
Dry Density (pcf)	119.0	122.3	126.9
Horiz. Pres. @ 1000lbs (psi)	50.0	45.0	21.0
Horiz. Pres. @ 2000lbs (psi)	122.0	112.0	49.0
Displacement	4.22	3.85	4.12
Expansion Pressure (psi)	0.0	0.0	0.1
Exudation Pressure (psi)	141	248	417
R Value	16	22	56

* HAND TAMPED



R Value at 300 PSI = 29

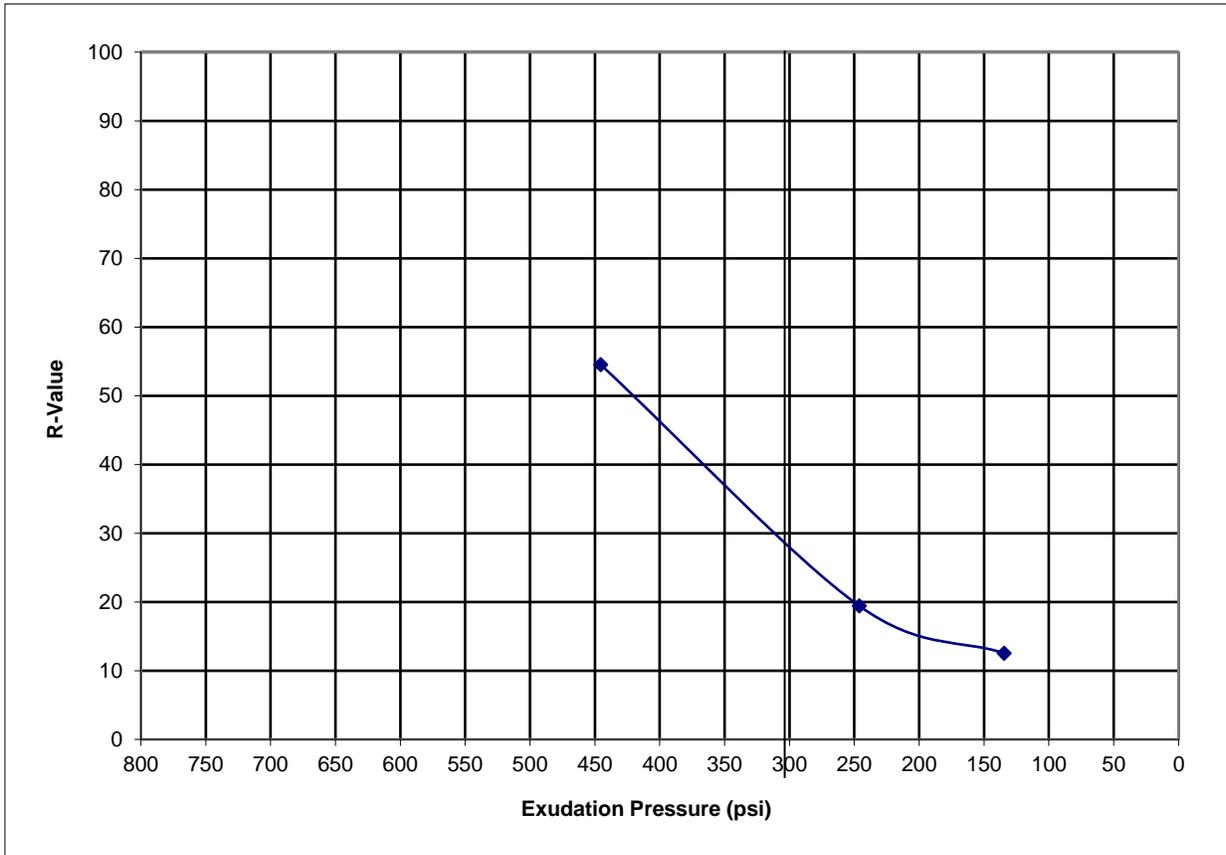
PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave
LOCATION: Phoenix, AZ
MATERIAL: Clayey Sand with Gravel
SAMPLE SOURCE: R-6 @ 1-5

JOB NO: 65215140
WORK ORDER NO: 65215140
LAB NO: R-6 @ 1-5
DATE RECEIVED: 11/03/21

RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	14.8%	13.0%	11.3%
Compaction Pressure (psi)	*	*	100
Specimen Height (inches)	2.40	2.50	2.41
Dry Density (pcf)	123.6	124.5	129.1
Horiz. Pres. @ 1000lbs (psi)	53.0	49.0	22.0
Horiz. Pres. @ 2000lbs (psi)	127.0	118.0	55.0
Displacement	4.08	3.69	3.64
Expansion Pressure (psi)	0.0	0.0	0.0
Exudation Pressure (psi)	134	246	446
R Value	13	19	55

* HAND TAMPED



R Value at 300 PSI = 26

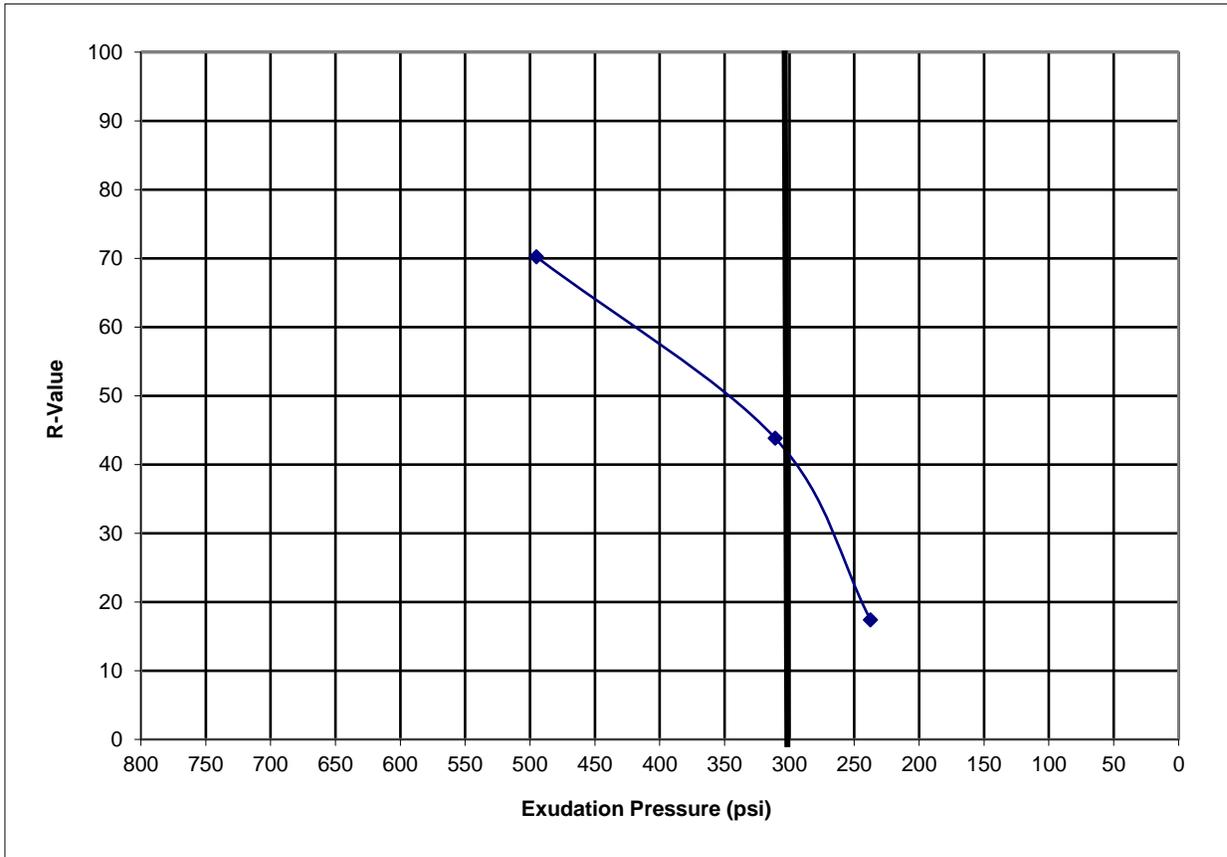
PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave
LOCATION: Phoenix, AZ
MATERIAL: Clayey Sand
SAMPLE SOURCE: R-8 @ 1-5

JOB NO: 65215140
WORK ORDER NO: 65215140
LAB NO: R-8 @ 1-5
DATE RECEIVED: 11/03/21

RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	14.2%	12.5%	10.8%
Compaction Pressure (psi)	*	100	200
Specimen Height (inches)	2.48	2.41	2.48
Dry Density (pcf)	121.1	127.0	128.3
Horiz. Pres. @ 1000lbs (psi)	48.0	26.0	15.0
Horiz. Pres. @ 2000lbs (psi)	121.0	69.0	33.0
Displacement	3.83	3.86	4.08
Expansion Pressure (psi)	0.0	0.0	0.4
Exudation Pressure (psi)	237	311	495
R Value	17	44	70

* HAND TAMPED



R Value at 300 PSI = 40

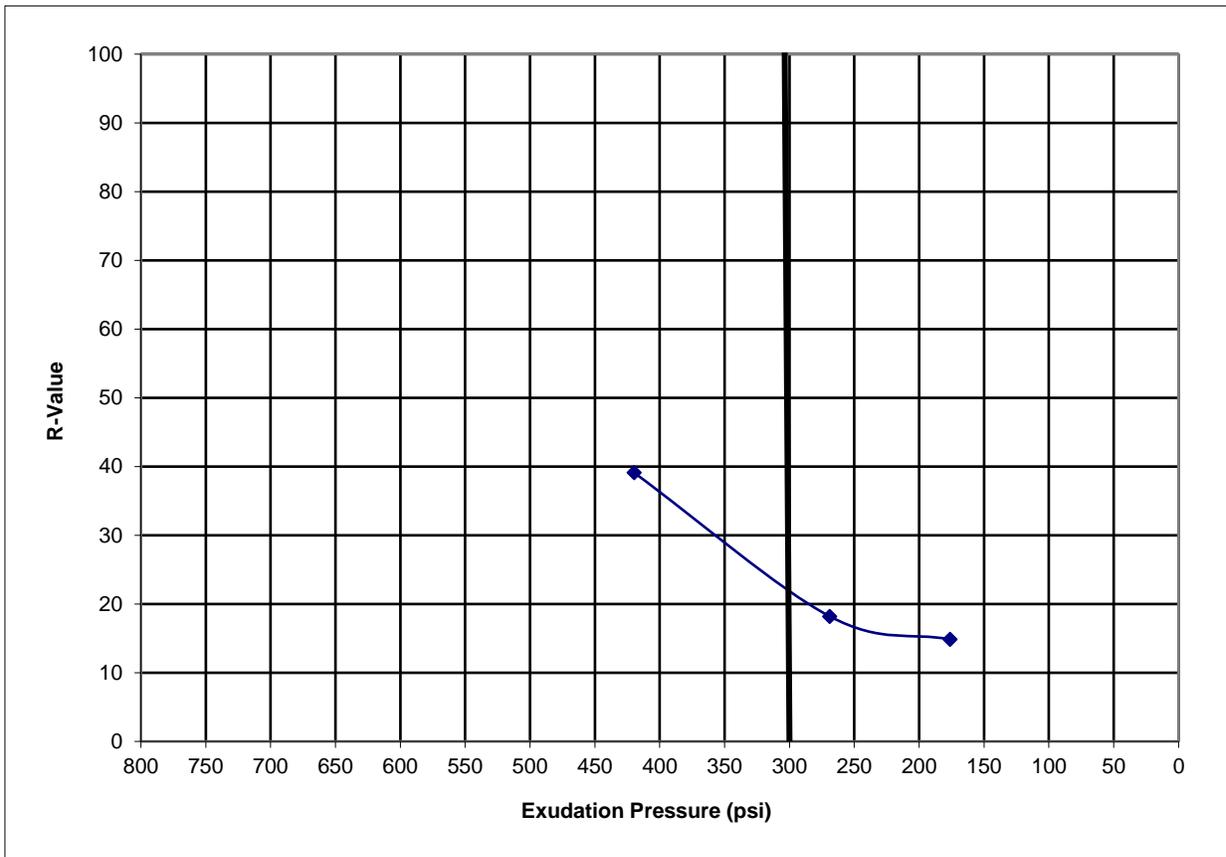
PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave
LOCATION: Phoenix, AZ
MATERIAL: Sandy Lean Clay
SAMPLE SOURCE: R-9 @ 1-5

JOB NO: 65215140
WORK ORDER NO: 65215140
LAB NO: R-9 @ 1-5
DATE RECEIVED: 11/04/21

RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	20.4%	18.6%	16.7%
Compaction Pressure (psi)	*	75	125
Specimen Height (inches)	2.68	2.57	2.52
Dry Density (pcf)	108.8	113.2	117.8
Horiz. Pres. @ 1000lbs (psi)	56.0	50.0	32.0
Horiz. Pres. @ 2000lbs (psi)	130.0	121.0	81.0
Displacement	3.92	3.88	3.80
Expansion Pressure (psi)	0.0	0.0	0.2
Exudation Pressure (psi)	176	269	420
R Value	15	18	39

* HAND TAMPED



R Value at 300 PSI = 21

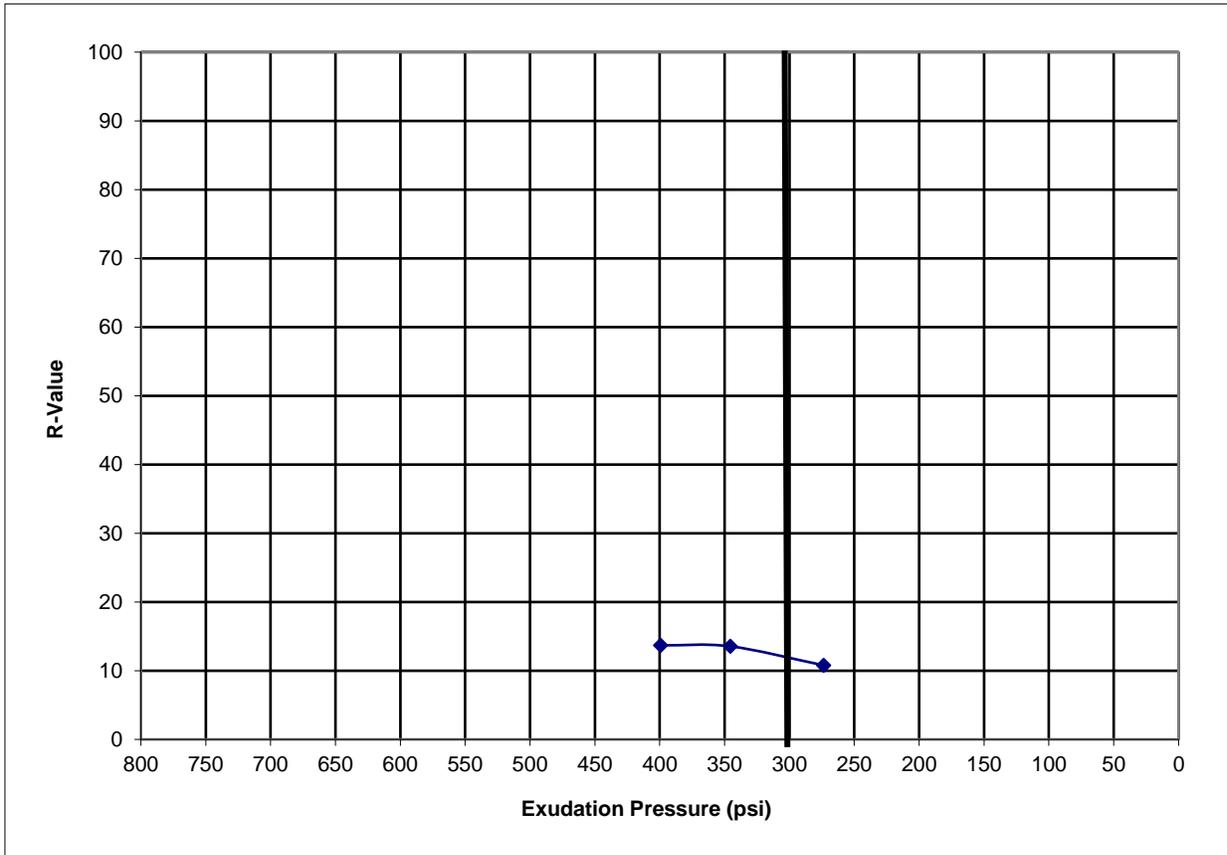
PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave
LOCATION: Phoenix, AZ
MATERIAL: Sandy Lean Clay
SAMPLE SOURCE: R-12 @ 1-5

JOB NO: 65215140
WORK ORDER NO: 65215140
LAB NO: R-12 @ 0.75-5
DATE RECEIVED: 11/03/21

RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	21.9%	20.1%	18.2%
Compaction Pressure (psi)	*	*	75
Specimen Height (inches)	2.48	2.58	2.55
Dry Density (pcf)	106.2	110.6	115.0
Horiz. Pres. @ 1000lbs (psi)	58.0	52.0	47.0
Horiz. Pres. @ 2000lbs (psi)	134.0	130.0	128.0
Displacement	4.01	3.98	3.94
Expansion Pressure (psi)	0.0	0.0	0.0
Exudation Pressure (psi)	274	346	399
R Value	11	14	14

* HAND TAMPED



R Value at 300 PSI = 12

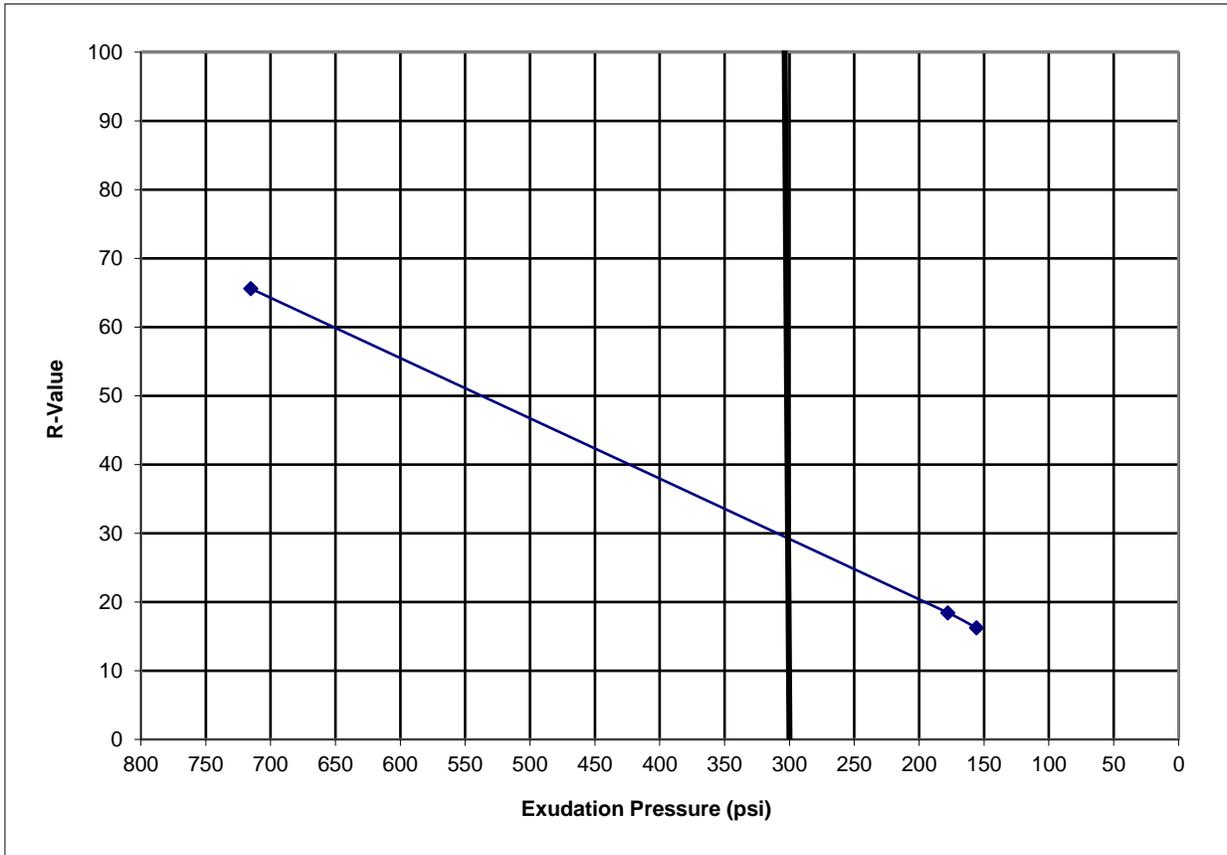
PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave
LOCATION: Phoenix, AZ
MATERIAL: Clayey Sand with Gravel
SAMPLE SOURCE: R-13 @ 1-5

JOB NO: 65215140
WORK ORDER NO: 65215140
LAB NO: R-13 @ 1-5
DATE RECEIVED: 11/03/21

RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	13.2%	11.3%	9.5%
Compaction Pressure (psi)	*	75	150
Specimen Height (inches)	2.38	2.37	2.37
Dry Density (pcf)	120.8	132.3	134.7
Horiz. Pres. @ 1000lbs (psi)	50.0	48.0	17.0
Horiz. Pres. @ 2000lbs (psi)	120.0	118.0	36.0
Displacement	3.80	3.44	3.98
Expansion Pressure (psi)	0.0	0.0	0.7
Exudation Pressure (psi)	156	178	715
R Value	16	18	66

* HAND TAMPED



R Value at 300 PSI = 30

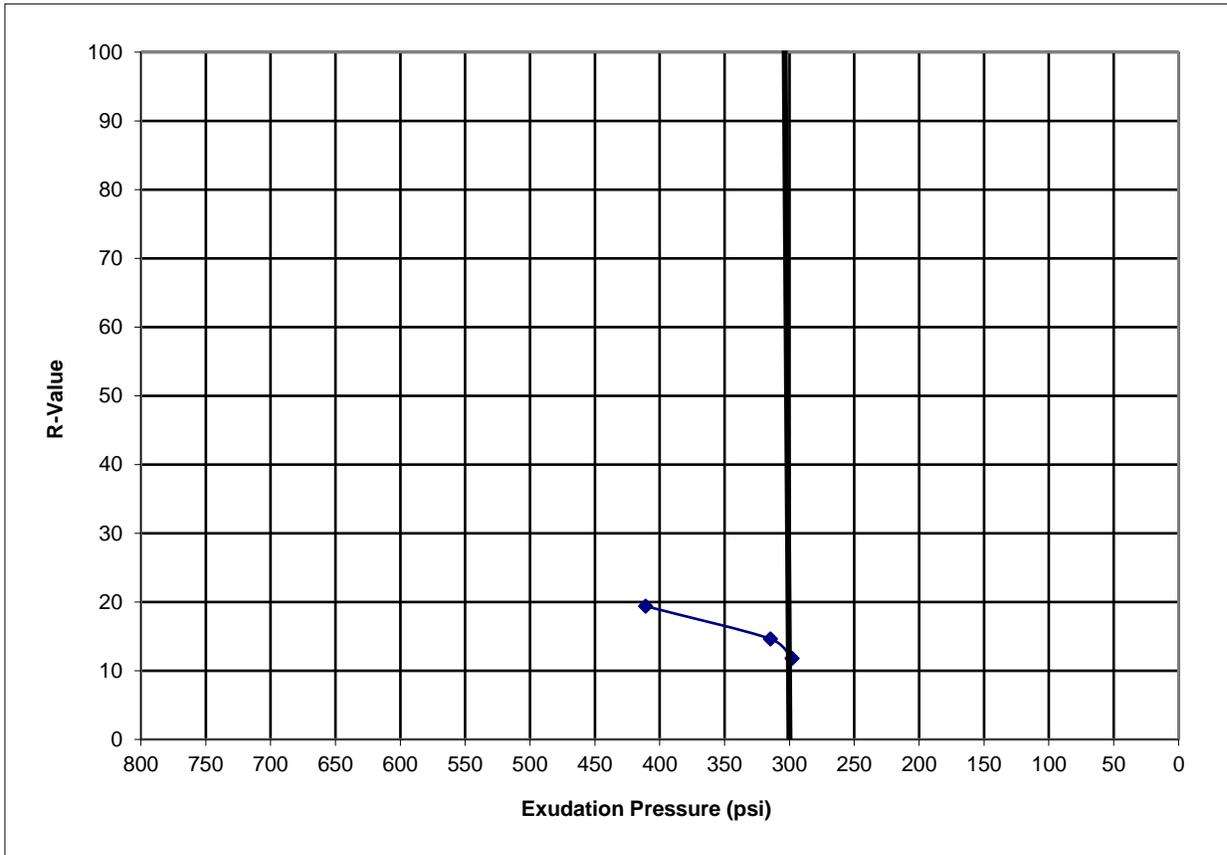
PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave
LOCATION: Phoenix, AZ
MATERIAL: Sandy Fat Clay
SAMPLE SOURCE: R-16 @ 1-5

JOB NO: 65215140
WORK ORDER NO: 65215140
LAB NO: R-16 @ 0.75-5
DATE RECEIVED: 11/05/21

RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (ASTM D2844)

SPECIMEN I. D.	A	B	C
Moisture Content	23.8%	21.9%	20.0%
Compaction Pressure (psi)	*	*	75
Specimen Height (inches)	2.59	2.57	2.55
Dry Density (pcf)	104.1	108.3	112.3
Horiz. Pres. @ 1000lbs (psi)	57.0	51.0	46.0
Horiz. Pres. @ 2000lbs (psi)	132.0	127.0	117.0
Displacement	4.32	4.06	3.82
Expansion Pressure (psi)	0.0	0.0	0.0
Exudation Pressure (psi)	298	315	411
R Value	12	15	19

* HAND TAMPED



R Value at 300 PSI = 12

SUMMARY OF LABORATORY RESULTS

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SOIL PROPERTIES 2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON.DATATEMPLATE.GDT 3/11/22

Borehole No.	Depth (ft.)	USCS Soil Class.	In-Situ Properties		Classification				Expansion Testing					Corrosivity				Remarks
			Dry Density (pcf)	Water Content (%)	Passing #200 Sieve (%)	Atterberg Limits			Dry Density (pcf)	Water Content (%)	Surcharge (psf)	Expansion (%)	Expansion Index EI ₅₀	pH	Resistivity (ohm-cm)	Sulfates (ppm)	Chlorides (ppm)	
						LL	PL	PI										
R2	1.0 - 4.5	SC			39	38	24	14	106	13.9	100	1.1						
R2	2.0 - 2.2	SC	82	9														1, 2
R3	0.8 - 5.0	CL			52	37	19	18					8.7	2771	26	<3		
R3	1.0 - 2.0	CL	119	8														1, 2
R4	0.6 - 4.0	SC			43	39	18	21	11	12.0	100	3.1						
R4	1.0 - 2.0	SC	99	8														1, 2
R5	0.8 - 4.5	SM			38	61	34	27					8.9	4556	86	<3		
R5	2.0 - 2.7	SM	84	14														1, 2
R6	1.1 - 5.0	SC			33	41	19	22	115	9.7	100	1.5						
R6	2.0 - 3.0	SC	98	7														1, 2
R7	0.8 - 5.0	CH			52	59	25	34					8.5	3281	86	4.8		
R7	2.0 - 3.0	CH	111	12														1, 2
R8	1.1 - 5.0	SC			40	43	21	22	112	11.4	100	2.0						
R8	2.0 - 3.0	SC	105	5														1, 2
R9	1.0 - 5.0	CL			66	47	21	26										
R9	1.0 - 2.0	CL	98	13					105	13.1	100	4.8						1, 2
R10	1.3 - 5.0	SC			47	55	22	33					8.9	3982	67	<3		
R10	2.0 - 3.0	SC	99	10														1, 2
R11	0.8 - 5.0	SC			45	33	17	16					9.0	2453	64	<3		
R11	2.0 - 3.0	SC	97	9														1, 2
R12	0.8 - 5.0	CL			59	47	19	28	103	13.3	100	9.5						
R12	2.0 - 3.0	CL	102	16														1, 2
R13	1.0 - 5.0	SC			35	28	17	11	115	10.6	100	3.5						
R13	2.0 - 3.0	SC	107	14														1, 2
R14	0.6 - 5.0	CL			51	48	19	29					8.6	1778	43	9		

REMARKS

1. Dry Density and/or moisture determined from one or more rings of a multi-ring sample.
2. Visual Classification.
3. Submerged to approximate saturation.
4. Expansion Index in accordance with ASTM D4829-95.
5. Air-Dried Sample

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave	 4685 S Ash Ave, Ste H-4 Tempe, AZ	PROJECT NUMBER: 65215140
SITE: Happy Valley Road Phoenix, Arizona	PH. 480-897-8200 FAX. 480-897-1133	CLIENT: Wilson & Company Inc Engineers & Architects Phoenix, Arizona
		EXHIBIT: B-23

SUMMARY OF LABORATORY RESULTS

Borehole No.	Depth (ft.)	USCS Soil Class.	In-Situ Properties		Classification			Expansion Testing					Corrosivity				Remarks	
			Dry Density (pcf)	Water Content (%)	Passing #200 Sieve (%)	Atterberg Limits			Dry Density (pcf)	Water Content (%)	Surcharge (psf)	Expansion (%)	Expansion Index EI ₅₀	pH	Resistivity (ohm-cm)	Sulfates (ppm)		Chlorides (ppm)
						LL	PL	PI										
R14	2.0 - 3.0	CL	96	15														1, 2
R15	1.0 - 5.0	CL			68	43	18	25						8.8	1369	192	17	
R15	1.0 - 2.0	CL	107	11														1, 2
R16	0.8 - 5.0	CH			68	54	19	35	101	15.6	100	3.2						
R16	2.0 - 3.0	CH	97	19														1, 2
R17	0.7 - 5.0	CL			59	46	17	29						8.3	2325	81	13	
R17	1.0 - 2.0	CL		10														2

REMARKS

1. Dry Density and/or moisture determined from one or more rings of a multi-ring sample.
2. Visual Classification.
3. Submerged to approximate saturation.
4. Expansion Index in accordance with ASTM D4829-95.
5. Air-Dried Sample

PROJECT: Happy Valley Road Improvements- 67th Ave to 35th Ave	 4685 S Ash Ave, Ste H-4 Tempe, AZ	PROJECT NUMBER: 65215140
SITE: Happy Valley Road Phoenix, Arizona	PH. 480-897-8200 FAX. 480-897-1133	CLIENT: Wilson & Company Inc Engineers & Architects Phoenix, Arizona
		EXHIBIT: B-24

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SOIL PROPERTIES 2 65215140 HAPPY VALLEY ROAD.GPJ TERRACON.DATATEMPLATE.GDT 3/11/22



Laboratory Analysis Report

Terracon
 Matthew Kleinholz
 4685 S. Ash Ave
 Suite H4
 Tempe, AZ 85282

Project: 65215140
 Date Received: 11/5/2021
 Date Reported: 11/12/2021
 PO Number: 65215140

Lab Number: 939395-1	R-17 (0.7-5)
-----------------------------	---------------------

<i>Test Parameter</i>	Method	Result	Units	Levels
pH (ARIZ 236e)	ARIZ 236e	8.3	SU	
Minimum Resistivity	ARIZ 236e	2325	ohm-cm	
Sulfate	ARIZ 733b	81	ppm	
Chloride	ARIZ 736b	13	ppm	

Lab Number: 939395-2	R3 (0.75-5)
-----------------------------	--------------------

<i>Test Parameter</i>	Method	Result	Units	Levels
pH (ARIZ 236e)	ARIZ 236e	8.7	SU	
Minimum Resistivity	ARIZ 236e	2771	ohm-cm	
Sulfate	ARIZ 733b	26	ppm	
Chloride	ARIZ 736b	< 3	ppm	

Lab Number: 939395-3	R5 (0.8-5)
-----------------------------	-------------------

<i>Test Parameter</i>	Method	Result	Units	Levels
pH (ARIZ 236e)	ARIZ 236e	8.9	SU	
Minimum Resistivity	ARIZ 236e	4556	ohm-cm	
Sulfate	ARIZ 733b	86	ppm	
Chloride	ARIZ 736b	< 3	ppm	

Lab Number: 939395-4	R7 (0.8-5)
-----------------------------	-------------------

<i>Test Parameter</i>	Method	Result	Units	Levels
pH (ARIZ 236e)	ARIZ 236e	8.5	SU	
Minimum Resistivity	ARIZ 236e	3281	ohm-cm	
Sulfate	ARIZ 733b	86	ppm	
Chloride	ARIZ 736b	4.8	ppm	



Laboratory Analysis Report

Terracon
 Matthew Kleinholz
 4685 S. Ash Ave
 Suite H4
 Tempe, AZ 85282

Project: 65215140
 Date Received: 11/5/2021
 Date Reported: 11/12/2021
 PO Number: 65215140

Lab Number: 939395-5	R10 (1.333-5)
-----------------------------	----------------------

<i>Test Parameter</i>	Method	Result	Units	Levels
pH (ARIZ 236e)	ARIZ 236e	8.9	SU	
Minimum Resistivity	ARIZ 236e	3982	ohm-cm	
Sulfate	ARIZ 733b	67	ppm	
Chloride	ARIZ 736b	< 3	ppm	

Lab Number: 939395-6	R11 (0.75-5)
-----------------------------	---------------------

<i>Test Parameter</i>	Method	Result	Units	Levels
pH (ARIZ 236e)	ARIZ 236e	9.0	SU	
Minimum Resistivity	ARIZ 236e	2453	ohm-cm	
Sulfate	ARIZ 733b	64	ppm	
Chloride	ARIZ 736b	< 3	ppm	

Lab Number: 939395-7	R15 (0.99-4.99)
-----------------------------	------------------------

<i>Test Parameter</i>	Method	Result	Units	Levels
pH (ARIZ 236e)	ARIZ 236e	8.8	SU	
Minimum Resistivity	ARIZ 236e	1369	ohm-cm	
Sulfate	ARIZ 733b	192	ppm	
Chloride	ARIZ 736b	17	ppm	



Laboratory Analysis Report

Terracon
Matthew Kleinholz
4685 S. Ash Ave
Suite H4
Tempe, AZ 85282

Project: 65215140
Date Received: 11/15/2021
Date Reported: 11/18/2021
PO Number: 65215140

Lab Number: 939499-1 **R14 (0.6 - 5)**

<i>Test Parameter</i>	Method	Result	Units	Levels
pH (ARIZ 236e)	ARIZ 236e	8.7	SU	
Minimum Resistivity	ARIZ 236e	2147	ohm-cm	
Sulfate	ARIZ 733b	39	ppm	
Chloride	ARIZ 736b	< 3	ppm	

APPENDIX C

Pavement Design

Design Traffic Analysis



Spreadsheet To Calculate Traffic for Pavement Design

- ◆ Traffic Analysis is based upon procedures by the Asphalt Institute, MS-1 (2008)
- ◆ Average Daily Traffic (ADT) is required along with annual growth rate
- ◆ Lane factor adjusts design lane traffic for 2, 4 or 6 lanes
- ◆ Truck quantities are based on Rural, Urban or Interstate statistics
- ◆ All Truck Factors are 18-kip equivalents per vehicle

Initial Data

PROJECT DATA

Project name:	Proposed Happy Valley Road Improvements
Location:	Happy Valley Road, 67th Ave to 35th Ave
Terracon Project No.	65215140

STREET DATA

Street Name	Happy Valley Road
Current Average Daily Traffic (ADT)	33,768
Design Period (years)	20
Annual Growth Rate (%)	1.10%
Number of Traffic Lanes (2, 4 or 6)	6
Percentage of Trucks (%)	6.0%

STREET CLASSIFICATIONS

Rural Systems	Urban Systems
◆ Interstate	◆ Interstate
◆ Principal	◆ Freeway
◆ Minor Arterial	◆ Principal
◆ Major Collector	◆ Minor Arterial
◆ Minor Collector	◆ Collector

Equivalent 18-kip Axle Load Analysis

Vehicle Type	% Traffic	No. of Vehicles	Truck Factor	Growth Factor	Equivalent Axle Loads
Dysart Road					
Passenger Cars	94%	11,585,801	0.0008	22.23	206,085
Trucks	6%	739,519	1.2000	22.23	19,731,516
All Single Units and Automobiles	100%	12,325,320			19,937,601
All Vehicles	100%	12,325,320			19,937,601

Traffic Summary

TOTALS

Equivalent Axle Loads (EAL's)	19,937,601
Lane Factor	0.35
Design Equivalent Axle Loads	6,978,160
Design Traffic Number (DTN)	955.9

Design Resilient Modulus Analysis

Project Data

PROJECT NAME, LOCATION and SEASONAL VARIATION FACTOR

Project Name: Proposed Happy Valley Road Improvements
 Location: Maricopa County
 Seasonal Variation Factor: 1.0

Laboratory Test Data

Boring No. Point ID	Boring Location	Depth (ft)	LL	PI	-#200	Laboratory R-Value	Correlated R-Value
R-2		1 – 5	38	14	38.6	64	29.4
R-3		1 – 5	37	18	52.0		20.5
R-4		0.5 – 4	39	21	42.5	29	19.3
R-5		1 – 4.5	61	27	38.0		15.2
R-6		1 – 5	41	22	33.2	26	20.1
R-7		1 – 5	59	34	51.5		10.6
R-8		1 – 5	43	22	40.0	40	18.8
R-9		1 – 5	47	26	66.4	21	12.6
R-10		1.5 – 5	55	33	46.9		11.3
R-11		1 – 5	33	16	45.1		24.5
R-12		1 – 5	47	28	59.1	12	12.4
R-13		1 – 5	28	11	35.4	30	36.4
R-14		0.5 – 5	48	29	51.1		12.6
R-15		1 – 5	43	25	67.7		13.0
R-16		1 – 5	54	35	68.4	12	9.4
R-17		1 – 5	46	29	59.4		11.9

Mean R-Value and Modulus Calculations

Number of Laboratory Tested R-Values:	8 (N _t)
Average of Laboratory Tested R-Value Results:	29.25 (R _t)
Standard Deviation of Laboratory Tested R-Values:	16.89 (SD _t)
Number of Correlated R-Value:	16 (N _c)
Average of Correlated R-Value Results:	17.37 (R _c)
Standard Deviation of Correlated R-Values:	7.52 (SD _c)
Adjusted Average of Tested R-Values:	22.4
Adjusted Average of Correlated R-Values:	17.4 (R _c)
Calculation for Mean R-Value:	
$R_{\text{mean}} =$	$\frac{2 \times N_t \times R_t \times SD_c^2 + N_c \times R_c \times SD_t^2}{2 \times N_t \times SD_c^2 + N_c \times SD_t^2}$
$R_{\text{mean}} =$	18.2
Seasonal Variation Factor for Project Location=	1.0
Design Resilient Modulus M _r (adjusted for SVF)=	11,173 psi

Flexible Pavement Design Analysis



Design Criteria

PROJECT DATA

Pavement Designation	Happy Valley Road
Design Life (years)	20
Equivalent Axle Loads/Day	956
Total ESALs	6,978,160
Seasonal Variation Factor	1.0
Reliability	95%
Overall Standard Deviation	0.45

SUBGRADE CONDITIONS

Mean R-Value, R_{Mean}	18.2
Resilient Modulus MR (psi)	11,175
Design Modulus (psi)	11,175

SERVICEABILITY

Initial Design Serviceability Index	4.5
Terminal Design Serviceability Index	2.5

LAYER COEFFICIENTS

	Structural	Drainage
Asphalt Rubber	0.61	N/A
Asphalt Concrete	0.42	N/A
Aggregate Base Course	0.12	1.00
Cement Treated Subgrade	0.16	1.00

Design Calculations

Required Structural Number SN: **4.18**

Alternative	Recommended Pavement Section Thickness Inches				Total Structural Number	Δ Structural Number
	Asphalt Rubber	Asphalt Concrete Surface	Aggregate Base Course	Lime Treated Subgrade		
A	1.5	5.0	4.0	6.0	4.46	0.28
B		7.5	4.0	6.0	4.59	0.41

EARTHWORK SHRINKAGE ESTIMATES



Terracon Project No.: 65215140

Project Name: Proposed Happy Valley Road Improvements

R = Ring Sample

Under Shrinkage / Bulking column, positive numbers indicate Shrinkage and negative numbers indicate Bulking.

Note: Standard Proctor Maximum Dry Densities shown are rock corrected.

Boring	Test	Depth bgs (in)	Maximum Dry Density (pcf)	95% of Max Dry Density (pcf)	Optimum Moisture (%)	(In-situ) Dry Density (pcf)	(In-situ) Moisture Content (%)	Compaction (%)	Shrinkage / Bulking (%)
R-2	R	2	111.6	106.0	15.9	82	9	73	23
R-4	R	2	117.2	111.3	14.0	99	8	84	11
R-6	R	2	120.8	114.8	11.7	98	7	81	15
R-8	R	2	118.2	112.3	13.4	105	5	89	6
R-9	R	2	110.7	105.2	15.1	98	13	89	7
R-12	R	2	108.9	103.5	15.3	102	16	94	1
R-13	R	2	121.0	115.0	12.6	107	14	88	7
R-16	R	2	106.3	101.0	17.6	97	19	91	4

ESTIMATED AVERAGE PERCENT SHRINKAGE: 9

Preliminary Pavement Life Cycle Cost Analysis

- ◆ Based upon ADOT Procedures and assumed maintenance schedules
- ◆ Initial costs are based upon bid tabs of regional ADOT projects or other local costs
- ◆ Life cycle costs are for comparative purposes only and are not for estimation of project costs

Project Data

Project Name	Happy Valley Road	Interest Rate	5%
Project Number	65215140	Analysis Period (yr.)	20
Roadway	HVR Between 67th & 35th Avenues		

Pavement Alternatives:	A	B	C	D
New Asphalt Pavement (in)	6.5			
New Aggregate Base Course (in)	4			
Lime Treated Subgrade (in)	6			
Mill		2		
SAMI		1		
ARAC (in.) Overlay		2		

Initial Costs (per lane mile)

New Asphalt Pavement (in)	234,150.40			
New Aggregate Base Course (in)	66,598.40			
Lime Treated Subgrade (in)	60,755.20			
Mill		14,059.58		
SAMI		25,132.80		
ARAC (in.) Overlay		79,109.18		
Total Initial Cost (PW):	361,504.00	118,301.57		

Maintenance Costs (per lane mile)

Maintenance Cost	1,000.00	1,000.00		
Number of Years Performed	4	8		
Maintenance Cost (Chip Seal)	15,065.60	15,065.60		
Number of Years Performed	1	3		
Total Maintenance Cost (PW):	19,065.60	53,196.80		

2" AC Overlay Rehabilitation Cost (per lane mile)

Year 4.5		118,301.57		
Year 13		118,301.57		
Year 16	118,301.57	118,301.57		
Total Rehabilitation Cost (PW):	118,301.57	354,904.71		

Salvage Value (per lane mile)

Percent of Initial Cost	35%	35%		
Salvage Value at End of Life Cycle	126,526.40	41,405.55		
Total Salvage Value (PW):	47,686.47	15,605.32		

Life Cycle Costs (per lane mile)

Total Present Worth	451,184.70	510,797.76		
Average Annual Cost	36,204.23	40,987.73		

BID PROPOSAL
CITY OF PHOENIX, ARIZONA
OFFICE OF THE CITY ENGINEER
PROJECT TITLE: HAPPY VALLEY ROAD: 67TH AVENUE TO 35TH AVENUE
ROADWAY IMPROVEMENTS
PROJECT NO.: ST85100437
FEDERAL AID PROJECT NO: PHX-0(363)D
ADOT TRACS NO: T0239 01C
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 and Vendor Number)

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 shall be in accordance with all applicable Maricopa Association of Governments' (MAG) Uniform Standard Specifications and Uniform Standard Details, latest edition, and the City of Phoenix Supplements to the MAG Uniform Standard Specifications and Details, latest edition, 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 shall be submitted with a proposal guarantee of cash, 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 shall be completed within 660 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 shall acknowledge all addenda in writing. By writing the addendum number(s) below, the bidder agrees that this proposal is computed with consideration of the specification book(s) plus any addenda.

<u>ADDENDUM NO.</u>	<u>DATE</u>	<u>ADDENDUM NO.</u>	<u>DATE</u>
_____	_____	_____	_____
_____	_____	_____	_____

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	E6992000	Allowance for StormWater Pollution Prevention Best	Allow	1	\$200,000.00	\$200,000.00
2	M1042005	Allowance for Extra Work	Allow	1	\$2,500,000.00	\$2,500,000.00
3	M1058000	Construction Surveying And Layout	LS	1		
4	M1058002	2-Person Survey Party Contingent Item	HR	250		
5	M2001005	Earthwork for Basin,includes clearing and grubbing of the site, excavation, grading and shaping	CY	27,385		
6	M2050001	Roadway Excavation, Including Haul	CY	5,682		
7	M2010011	Clearing and Grubbing (Roadway Widen Areas)	SY	93,262		
8	M2152001	Channel Excavation	CY	36,132		
9	M2200007	Rip Rap, D50=6"	CY	51		
10	M2200012	Rip Rap, D50=12"	CY	222		
11	M2204001	Rock Riprap, 3" to 6"	SF	130,605		
12	M2205005	Replace Grouted Rip Rap (MAG 220)	SF	54		
13	M2205010	Sawcut and Remove Grouted Rip Rap	SF	26		
14	M3000052	Asphalt Concrete Pavement Milling (1.5" Depth)	SY	100,164		
15	M3010001	Subgrade Preparation	SY	105,682		
16	M3010002	6" Thick Lime Treated Subgrade(MAG 309)	SY	105,682		
17	M3100000	4" Thick Aggregate Base Course (MAG 310)	Ton	22,997		
18	M3210250	5" Thick Asphalt Concrete Surface Course, Type C 3/4	Ton	29,129		
19	M3260100	Polymer Modified Asphalt Concrete Surface Course (Ton	17,028		
20	M3290100	Emulsified Asphalt For Tack Coat, Type SS-1H	Ton	104		
21	M3304100	Power Broom	Hr	960		
22	M3362000	Slurry Seal Coat	SY	105,682		
23	M3400000	Concrete Median Nose, 4' Thick, MAG STD DET 223	SF	861		
24	M3400009	Decorative Brick Pavers, MAG STD DET 225	SF	14,127		

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
25	M3400240	Concrete Valley Gutter & Apron, MAG STD DET 240	SF	6,920		
26	M3400400	Concrete Sidewalk, 4" Thick, COP STD DET P1230	SF	65,914		
27	M3400415	Truncated Domes for Sidewalk Ramps, COP STD DET	SF	880		
28	M3400485	Concrete Curb Ramp, COP STD DET P1233, P1234, P1235, P1236, P1237, P1238, P1239, P1240, OR P1241 (9" Thick)	SF	21,993		
29	M3400490	Concrete Sidewalk Ramp, COP STD DET P1241-2, P12	SF	2,003		
30	M3400500	Concrete Curb Ramp, 9" Thick, MCDOT STD DET 2022	SF	528		
31	M3400551	Concrete Driveway, Return Type, COP STD DET P1243	SF	2,919		
32	M3400553	Concrete Driveway Entrance, 9" Thick, COP STD DET	SF	1,136		
33	M3400556	Concrete Driveway Entrance, 9" Thick, COP STD DET	SF	1,045		
34	M3401256	Concrete Bus Bay Pavement, COP STD DET P1256-1, 4	SF	3,034		
35	M3401260	Parkway Bus Shelter/Accessory Pad, 9" Thick, COP ST	SF	3,381		
36	M3401262	Parkway Bus Shelter/Accessory Pad, 9" Thick, COP ST	SF	8,761		
37	M3402201	Concrete Curb & Gutter, MAG STD DET 220, Type "A"	LF	11,078		
38	M3402221	Concrete Single Curb, MAG STD DET 222, Type "A"	LF	21,767		
39	M3402230	Concrete Header Per Plans	LF	26		
40	M3450020	Adjust EX Manhole Frame & Cover, MAG STD DET 42	EA	60		
41	M3453006	Adjust EX Utility Valve, MAG STD DET 391-1 & 391-2	EA	4		
42	M3453008	Adjust Water Valve, Type "A", COP STD DET P1391 &	EA	137		
43	M3453016	Adjust Survey Monument Handhole Frame & Cover	EA	13		
44	M3500010	Remove Portland Cement Concrete Single Curb, Curb & Gutter, Header Curb or Embankment Curb	LF	4,320		
45	M3500020	Remove Portland Cement Concrete Sidewalk, Drivew	SF	50,238		
46	M3500026	Remove Decorative Brick Pavers	SF	710		
47	M3500036	Remove Catch Basin, Backfill & Compact	EA	23		
48	M3400037	Remove Headwall, Backfill & Compact	EA	12		

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
49	M3400040	Remove Pipe, Backfill & Compact	LF	144		
50	M3400041	Remove Pipe	LF	106		
51	M3500060	Remove Asphalt Concrete Pavement	SY	105,858		
52	M3500062	Asphalt Sawcutting	LF	15,580		
53	M3500063	Concrete Sawcutting	LF	969		
54	M3500109	Remove Block Wall	LF	12		
55	M3500150	Remove Tree, 12" Diameter and Larger	EA	31		
56	M3500170	Remove Existing Bushes, Shurbs, Cacti, of Small Trees	EA	217		
57	M3500309	Sign Removal	EA	94		
58	M3505026A	#12 THHN Wire	LF	4,300		
59	M3505027	#10 Bond Wire	LF	2,150		
60	M3513120A	2.5" SCH 40 PVC Lighting Conduit (Directionally Bore)	LF	3,257		
61	M3513120B	2.5" SCH 40 PVC Lighting Conduit (Trench)	LF	3,981		
62	M3513250	No. 5 Junction Box (APS)	EA	41		
63	M3515045	Remove Existing Light Poles Standard, Per Plan	EA	5		
64	M3515052A	Furnish and Install 38'-6" Street Light Pole w/ 6' Mast	EA	33		
65	M3515052B	Furnish and Install 38'-6" Street Light Pole w/ 8' Mast	EA	2		
66	M3515052C	Furnish and Install 30'-6" Street Light Pole w/ 6' Mast	EA	8		
67	M3515052D	Furnish and Install 6' Street Light Mast Arm Onto Exis	EA	6		
68	M3515071	Furnish and Install 9,250 Lumen LED Street Light per	EA	41		
69	M3515076	Furnish and Install 4,700 Lumen LED Street Light per	EA	8		
70	M3515383	Remove Existing Light Mast Arm From Utility Pole	EA	1		
71	M3515384	Remove Existing Junction Box per Plan	EA	5		
72	M4012000	Traffic Control Devices	LS	1		

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
73	M4013000	Allowance for Uniformed, Off-Duty Law Enforcement	Allow	1	\$800,000.00	\$800,000.00
74	M4153104	Safety Rail, COP Standard Detail P1173	EA	1		
75	M4201006	Remove 6' Chain Link Fence	LF	3,356		
76	M4258008	Gravel Mulch, 2" Minus (4" Thick)	SY	66		
77	M4303000	Plant Establishment Guarantee and Maintenance (in	Month	12		
78	M4304007	Decomposed Granite, Stabilized for MultiPurpose Tra	SF	70,253		
79	M4304023	Decomposed Granite, 1/2 Inch Screened for General	SY	28,842		
80	M4305001	1 Gallon Shrub	EA	8		
81	M4305005	5 Gallon Shrub	EA	1,567		
82	M4305008	5 Gallon Accent	EA	2,126		
83	M4305015	15 Gallon Tree	EA	29		
84	M4305024	24" Box, Trees	EA	239		
85	M4307006	Hydroseed, Native Mix	SF	59,000		
86	M4309800	Cacti, Transplant	EA	1		
87	M4309820	Saguaro, Transplanting	EA	7		
88	M4400004	Modify Existing Irrigation System and Restore Landsc	LS	1		
89	M4400250	1/2", PVC Irrigation Pipe, Schedule 40	LF	4,234		
90	M4400255	3/4", PVC Irrigation Pipe, Schedule 40	LF	21,972		
91	M4400260	1" PVC Irrigation Pipe, Schedule 40	LF	7,811		
92	M4400262	2" PVC Irrigation Pipe, Sch. 40	LF	85		
93	M4400270	1 1/2", PVC Irrigation Pipe, Schedule 40	LF	2,335		
94	M4403100	1" Reduced Pressure Backflow Prevention Unit and C	EA	9		
95	M4403150	1-1/2" Reduced Pressure Backflow Prevention Unit a	EA	2		
96	M4404305	3/4" Gate Valve	EA	20		

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
97	M4404315	1-1/2" Gate Valve	EA	7		
98	M4404320	2" Gate Valve	EA	1		
99	M4404400	Flush Valves	EA	78		
100	M4404505	Pressure Regulator	EA	30		
101	M4404510	Multi-Port Emitter and Riser Assembly with Bug Cap	EA	1,370		
102	M4405400	4" Schedule 40 PVC Irrigation Sleeve	LF	2,229		
103	M4405600	6" Schedule 40 PVC Irrigation Sleeve	LF	668		
104	M4406106	4 to 6 Station Sprinkler Controller, Solar Powered, w	EA	11		
105	M4406200	1" Solar Valve and Assembly	EA	18		
106	M4406250	1-1/2" Solar Valve and Assembly	EA	2		
107	M4711000	1" Schedule 40 PVC Conduit	LF	77		
108	M4711001	2" Schedule 40 PVC Conduit	LF	884		
109	M4711003	2 1/2" Schedule 40 PVC Conduit	LF	8,267		
110	M4711005	4" Schedule 40 PVC Conduit	LF	87		
111	M4712003	No. 7 Junction Box	EA	31		
112	M4722001	Foundation for Type BP Pole	EA	1		
113	M4722004	Foundation for Type AP Pole	EA	7		
114	M4722007	Foundation for Type GP Pole	EA	2		
115	M4722010	Foundation for Type LP Pole	EA	19		
116	M4722013	Foundation for Type P45/DP45 Pole	EA	9		
117	M4722016	Foundation for Type P70/DP70 Pole	EA	18		
118	M4724002	Foundation for Power Pedestal, Type B	EA	7		
119	M4724004	Foundation for Traffic Signal Controller Cabinet	EA	8		
120	M4731000	Bicycle Loop Detector	EA	2		

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
121	M4731001	6' x 6' Loop Detector	EA	12		
122	M4732002	APS Pedestrian Push Button	EA	50		
123	M4733001	Dual EVP Detector and Confirmation Light	EA	24		
124	M4741008N	P45 25' Signal Mast Arm	EA	2		
125	M4741012	P45 35' Signal Mast Arm	EA	2		
126	M4741013	P45 40' Signal Mast arm	EA	2		
127	M4741014	P45 45' Signal Mast Arm	EA	4		
128	M4741015N	P70 50' Signal Mast Arm	EA	2		
129	M4741016N	P70 55' Signal Mast Arm	EA	4		
130	M4741917N	P70 60' Signal Mast Arm	EA	7		
131	M4741919N	P70 70' Signal Mast Arm	EA	3		
132	M4741036	Type BP Pole, 4'	EA	1		
133	M4741034	Type AP Pole, 15'	EA	7		
134	M4741038	Type GP Pole	EA	2		
135	M4741038	Type LP Pole	EA	19		
136	M4741039	Type P45 Pole	EA	9		
137	M4741041	Type P70 Pole	EA	18		
138	M4741053	Damper	EA	22		
139	M4751002	Electrical Power Service Pedestal, Type B	EA	8		
140	M4751002	Traffic Signal Controller Cabinet	EA	7		
141	M4761001	Type F- 3 Section 12" Signal Head	EA	31		
142	M4761002	Type F1- 3 Section 12" Signal Head	EA	67		
143	M476100FA	Type FA- 4 Section 12" Signal Head	EA	18		
144	M476100FA1	Type FA1- 4 Section 12" Signal Head	EA	19		

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
145	M476100X	Type R - 3 Section 12" Signal Head	EA	5		
146	M476100X	Type R1- 3 Section 12" Signal Head	EA	10		
147	M4741024	5' Riser, Single Luminaire Mast Arm Shoe	EA	34		
148	M47410XX	5' Riser, Dual Luminaire Mast Arm Shoe, 90 degree	EA	1		
149	M4741030	20' Riser, Single Luminaire Mast Arm Shoe	EA	8		
150	M4771001	LED Traffic Signal Luminaire	EA	48		
151	M4741014	COP Luminaire Mast Arm	EA	46		
152	M4762009	Countdown Pedestrian Signal Head (LED)	EA	50		
153	M4781001	Single Conductor Wire, #10 AWG White	LF	288		
154	M4781005	Single Conductor Wire, #10 Bare Copper	LF	984		
155	M478200X	5C ISMA Cable	LF	288		
156	M478400X	42C ISMA Cable	LF	288		
157	M478400X	Video Detection Cable	LF	288		
158	M4784004	EVP Detector and Confirmation Cable	LF	2,894		
159	M4786001	All Conductors, Cables & Splicing for Intersection	EA	15		
160	M4791001	Removal of Pole Type "A"	EA	29		
161	M4791008	Removal of Pole Type "M" with Mast Arm	EA	14		
162	M4791010	Removal of Pole, Type "SM/SR" with Mast Arm	EA	24		
163	M4792001	Removal of Controller Cabinet	EA	8		
164	M4792002	Removal of Traffic Signal Power Pedestal	EA	10		
165	M4793001	Removal of Traffic Signal Pole Foundations	EA	81		
166	M4794001	Miscellaneous Removal of Incidental Traffic Items	L.S.	1		
167	M5052062	Concrete Scupper, MAG Standard Detail 206	EA	5		
168	M5052063	Concrete Scupper, MAG Standard Detail 206, Modified	EA	1		

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
169	M5055007	Headwall For 12" Pipe, MAG Standard Details 501-1	EA	1		
170	M5055021	Concrete End Sections, MAG Standard Detail 545	EA	1		
171	M5055009	Headwall for 18" Pipe, MAG Standard Detail 501-3	EA	1		
172	M5051541	Concrete Catch Basin, Modified, Type "M-1, L=10-Ft"	EA	1		
173	M5051502	Concrete Catch Basin, Type "F", MAG Detail 535	EA	1		
174	M5052069	Concrete Spillway, MAG Std. Dtl 206-1	SF	864		
175	M5052074	Concrete Channel Lining Per Plans	SY	10,808		
176	M5155048	Trash Rack MAG Standard Detail 502-1	EA	1		
177	M6103710	Waterline Realignment, 10" and 12", Contingent Item	EA	1		
178	M6106003	Remove and Salvage Fire Hydrant	EA	2		
179	M6108010	New Fire Hydrant, COP STD DET P1359, P1360, P1361	EA	2		
180	M6180213	22" X 13.5" Horizontal Elliptical Pipe	LF	147		
181	M6184018	18" Rubber Gasket Reinforced Concrete Pipe, Class IV	LF	35		
182	M6210012	12" Corrugated Metal Pipe	LF	20		
183	7320292	Electrical Conduit (2-1.25") (PVC)	LF	22,826		
184	7320450	Pullbox (No.8) (City of Phoenix)	EA	21		
185	7320460	Pullbox (No.9) (City of Phoenix)	EA	16		
186	7320654	Break-Away Connector System (With 250' Tail)	EA	13		
187	7320787	Single Mode Fiber Optic Cable (144 Fibers)	LF	25,226		
188	7320794	Fiber Optic Splice Closure (City of Phoenix)	EA	12		
189	M7370424	Fiber Optic Equipment (Phoenix Field Hardened Eth	EA	11		
190	M7370455	Miscellaneous Electrical (As-Built Drawings)	LS	1		
191	M9001001	Illuminated Street Sign	EA	27		
192	M9011001	Wireless Network Radio	EA	8		

**CITY OF PHOENIX
 BID PROPOSAL FORM**

Happy Valley Road: 67th Avenue to 35th Avenue
 Project No: ST895100437
 Federal Aid No: PHX-0(363)
 ADOT TRACS No: MA-PHX-T0238 01C

ITEM NO.	BID (OR) M NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
193	M9021000	Video Detection Camera System (Per intersection)	EA	8		
194	M9021001	PTZ CCTV Camera	EA	7		
BID (ITEMS 1 THROUGH 194 - INCLUSIVE)						
_____ & _____/100 DOLLARS WRITTEN WORDS						

Prepared By:

 Signature

 Name

 Position/Title

 Firm Name

PROPOSAL SUBMITTAL

**Project Title: Happy Valley Road: 67th Avenue to 35th Avenue
Roadway Improvements
Project No.: ST85100437
Federal Aid Project No.: PHX-0(363)D
ADOT TRACS NO.: T0239 01C**

THIS PROPOSAL IS SUBMITTED BY _____

a corporation organized under the laws of the State of _____

a partnership consisting of _____

a joint venture consisting of _____

or individual trading as _____

of the City of _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

PHONE _____ VENDOR NO. _____

BY _____

Officer and Title (signature)

Officer and Title (print or type)

Date

WITNESS: If Contractor is an individual
(signature)

ATTEST: If Contractor is Corporation or Partnership
(signature and title)

SURETY BOND

**City of Phoenix Project No.: ST85100437
Federal Aid Project No.: PHX-0(363)D
ADOT TRACS NO: T0239 01C**

That we, _____, as Principal, (hereinafter called the Principal) and the _____, a corporation duly organized under the laws of the State of _____, as Surety, (hereinafter called the 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 **HAPPY VALLEY ROAD: 67TH AVENUE TO 35TH AVENUE ROADWAY IMPROVEMENTS**

NOW, THEREFORE, if the City of Phoenix shall accept the proposal of the Principal and the Principal shall 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 shall 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 shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____ A.D., 2024

Principal

Title

Mailing Address

Surety

WITNESS:

A.M. BEST RATING:

**DISADVANTAGED BUSINESS ENTERPRISE (DBE)
GOAL ASSURANCE**

The undersigned, fully cognizant of the requirements and of the goal established, hereby certifies that in the preparation of this bid for federal aid project:

ADOT TRACS No: _____

Agency Project No: _____

Project Name: _____

(CHECK ONE)

The bidder has met the established DBE goal and arrangements with certified DBEs have been made prior to the submission of the bid.

OR

The bidder has been unable to meet the established DBE goal prior to the submission of the bid and has made good faith efforts to do so.

THIS CERTIFICATE MAY NOT BE REVISED OR CORRECTED AFTER SUBMISSION OF THE BID.

If the bidder certifies that it has met the goal, the bidder cannot change its decision after submission of the bid and submit documentation of a good faith effort. If the bidder certifies that it has been unable to meet the goal and has made a good faith effort, the bidder cannot change its position after the submission of the bid and claim to have met or be able to meet the established goal.

In accordance with the DBE Special Provisions, the bidder shall specify its DBE participation on the "DBE Intended Participation Affidavit", or provide documentation of its good faith efforts, by 4:00 p.m. on the fifth calendar day following the bid opening. The bidder shall obtain the required affidavit from the _____

Insert Agency Name

Print Name of Firm

Print Name of Authorized Officer of Firm

Signature of Authorized Officer of Firm

Title

Date

On-Line Bidders List - All bidders complete an On-Line Bidders List at <https://utracs.azdot.gov/> and submit the corresponding Bidders List Email Confirmation Notice to the Agency by 4:00 pm on the 5th calendar day after bids are opened.

**CONSTRUCTION
DISADVANTAGED BUSINESS ENTERPRISE (DBE)
Intended Participation Affidavit**

INSTRUCTIONS

1. Do not submit *Instructions* page.
2. Contractors are encouraged to fill out the form based on information from prior arrangements made with the DBE Contractor, Subcontractor, Lower Tier Subcontractor, Supplier or Broker
3. The form must be signed by an authorized officer or principal of the DBE firm and submitted to the contractor.
4. The form must be submitted **by 4:00 p.m.** on or before the **fifth calendar day** after the bids are opened.
5. The DBE firm must be certified and licensed within the work category to be performed.
6. The form must be filled out **entirely**. Leave no blank spaces, use N/A or enter "0" if section does not apply.
7. NAICS Code: Enter up to three NAICS codes applicable to the description/scope of work (attach copy of quote(s) as necessary).
8. For additional description/scope of work fill out additional form(s) as necessary (attach copy of quote(s) as necessary).
9. A separate form must be submitted for each proposed DBE firm.
10. All partial items must be noted. If not, the DBE will be considered to be responsible for the entire item.
11. Completed form(s) must be scanned and emailed to _____

Definitions:

1. Unit Price or Hourly Rate Bid or Lump Sum Bid
 - *NAICS Code:* Identify the North American Industry Classification System code that the firm is certified as a DBE to perform (Refer to AZUTRACS at <https://utracs.azdot.gov/> & NAICS at <https://www.naics.com/>)
 - *Bid Item No.:* Identify the work item number that correlates to the work being performed
 - *Description / Scope of Work:* Identify work to be performed
 - *Total:* Identify the total dollar value for the work to be performed - ***Note*** - *The Total for any Bid Item on Affidavits cannot exceed the Prime Contractors Bid Tab Total for the same Bid Item*
2. Trucking
 - Identify total number of trucks owned by DBE and the total dollar value of work
 - Identify total number of DBE trucks used on this project and the total dollar value of work
 - Identify total number of DBE leased trucks used on this project and the total dollar value of work
 - Identify total number of non-DBE leased trucks with DBE drivers used on this project and the total dollar value of work
 - Identify total number of non-DBE leased trucks without DBE drivers used on this project and the total dollar value of work
3. Brokerage
 - Identify total dollar value of brokered work
 - Identify the fees or commission value that pertain to the total brokerage amount
4. Identify the total dollar amount to be subcontracted to a non-DBE firm
5. Identify the total dollar amount to be subcontracted to a DBE firm



CONSTRUCTION
DISADVANTAGED BUSINESS ENTERPRISE (DBE)
Intended Participation Affidavit – Summary

INSTRUCTIONS

1. Do not submit *Instruction* page.
2. Identify first-tier DBE firms and any lower-tier DBE firms if used by non-DBE subcontractors for total DBE utilization.
3. When completing the calculations table, enter the Contract Bid Amount (F) first so pop-up warning message does not appear.
4. Submit corresponding *DBE Intended Participation Affidavit* form for each DBE firm identified on this form.
5. Completed documentation can be scanned and emailed to _____

Definitions:

AZ UTRACS Registration No.: can be found conducting a search on the AZ UTRACS website: <https://utracs.azdot.gov/Search>.

DBE Liaison Name: the designated employee who shall be responsible for the administration of the prime's DBE program *Contract Bid*

Amount: Total dollar amount bidder proposes at time of bid (Total Bid Amount)

Prime Name: name of contractor

TRACS No.: number identifier for contracts, projects, solicitations, and purchase orders

A – DBE firm's name

B – Services provided by the DBE firm – must coincide with the NAICS Code the DBE is certified in

C – This amount should be the same as the "Minimum Contract Amount" on form 105C for each DBE firm listed

D – Adjustments

- Any deductions from DBE's total contract amount due to subletting of work to non-DBE firms
- DBE credit less than 100%
 - Suppliers receive 60% credit
 - Brokers receive credit for broker fees only (not full contract or P.O. value)
- Enter "0" if there are no adjustments

E – Total contract amount less any adjustments (*C* minus *D*)

F – Enter total bid amount on project

EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE REPORTS

(Project, Training and Annual)

Federal-Aid Projects

February 1, 1977; Revised July 1, 1978; Revised November 3, 1980 Revised April 15, 1981; Revised September 7, 1983; Revised October 15, 1998; Revised August 1, 2005; Revised March 1, 2015; Revised October 20, 2015

ANNUAL REPORT:

For each contract in the amount of \$10,000 or more, and for each subcontract regardless of tier not including material suppliers, in the amount of \$10,000 or more, the contractor and each subcontractor regardless of tier shall submit an annual Equal Employment Opportunity (EEO) Report containing all the information required on Form FHWA -1391.

The staffing figures to be reported should represent the project workforce on board in all or any part of the last payroll period preceding the end of July.

The report shall be submitted no later than September 1 to the agency (contract owner) compliance officer.

CITY OF PHOENIX
LIST OF MAJOR SUBCONTRACTORS AND SUPPLIERS

PROJECT NO.: ST85100437 PROJECT TITLE: Happy Valley Road: 67th Avenue to 35th Avenue Roadway Improvements

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
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> 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.: ST85100437 PROJECT TITLE: Happy Valley Road: 67th Avenue to 35th Avenue Roadway Improvements

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
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> NO				
	<input type="checkbox"/> YES <input type="checkbox"/> 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:

- | | | | |
|--------------------------|-------------------------------|------------------------------|-------|
| <input type="checkbox"/> | Corporation | Date of incorporation: | _____ |
| <input type="checkbox"/> | Limited Liability Company | Date organized: | _____ |
| <input type="checkbox"/> | Limited Liability Partnership | Date of registration: | _____ |
| <input type="checkbox"/> | Limited Partnership | Date established: | _____ |
| <input type="checkbox"/> | General Partnership | Date established: | _____ |
| <input type="checkbox"/> | Sole Proprietor | How many years in business?: | _____ |
| <input type="checkbox"/> | 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 un 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 Award

Within 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/Licenses

Within 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_____



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: _____

**BUY AMERICA CERTIFICATE
FOR COMPLIANCE WITH TITLE 23 USC § 313
(For Procurement of Steel, Iron, or Manufactured Products)
(EXCLUDES ROLLING STOCK)**

**Happy Valley Road: 67th Avenue to 35th Avenue
PROJECT NO. ST85100437
FEDERAL AID NO. PHX-0(363)D
ADOT TRACS NO. T0239 01C**

(Complete form and submit with bid)

The Bidder/Proposer hereby certifies that it will comply with the requirements of Title 23 USC § 313 and the applicable regulations in 23 CFR Part 635.410.

Executed on _____, 2024, at _____,
(Date) (City) (State)

Typewritten or Printed Name Signature of Authorized Official Title

BUY AMERICA CERTIFICATE FOR NON-COMPLIANCE WITH TITLE 23 USC §. 313

The Bidder/Proposer hereby certifies that it cannot comply with the requirements of Title 23 USC § 313, but it may qualify for an exception pursuant to Title 23 USC § 313 and the regulations in 23 CFR 635.410.

Executed on _____, 2024, at _____,
(Date) (City) (State)

Typewritten or Printed Name Signature of Authorized Official Title

**AFFIDAVIT BY CONTRACTOR
CERTIFYING THAT THERE WAS NO
COLLUSION IN BIDDING OF CONTRACT**

STATE OF: Arizona)
)
)
COUNTY OF: Maricopa) ss

_____ (Name of Individual)

being first duly sworn upon oath deposes and says:

That he is _____ (Title)

of _____ (Name of Company, Firm or Corporation)

and that, pursuant to Subsection 112(c) of Title 23, United States Code and Title 44, Chapter 10, Article 1, and Title 34, Chapter 2, Article 4 of Arizona Revised Statutes, he certifies that neither he nor anyone associated with the company, firm, or corporation mentioned above has, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of fully competitive bidding in connection with project:

Happy Valley Road: 67th Avenue to 35th Avenue Roadway Improvements
CITY OF PHOENIX PROJECT NOS.: ST85100437
FEDERAL AID NO. PHX-0(363)D
ADOT TRACS NO. T0239 01C

Subscribed and sworn to before me this

_____ day of _____, 2024.

_____ Signature

My Commission expires:

_____ Notary Public

If by a Corporation:
(Seal)

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.