



ADVERTISEMENT FOR BIDS

SPECIAL PROVISIONS

BIDDERS DOCUMENTS

TRACS/Proj. No.:

0000 PM ITO SL69801C ITO-0(204)T
SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION
(SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19)

Contracts and Specifications Group
205 S. 17TH Ave., 2nd Floor, M/D 121F
Phoenix, Arizona 85007-3217

ARIZONA DEPARTMENT OF TRANSPORTATION

ADVERTISEMENT FOR BIDS

BID OPENING: FRIDAY, NOVEMBER 06, 2026, AT 11:00 A.M. (M.S.T.)

TRACS NO	0000 PM ITO SL698 01C
PROJECT NO	ITO-0(204)T
TERMINI	SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION
LOCATION	SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19

ROUTE NO.	MILEPOST	DISTRICT	ITEM NO.
0000	N/A	SOUTHCENT	LOCAL

This project is being re-advertised. Firms that already obtained contract documents are instructed to destroy them as the contract documents have been revised. All bidders and subcontractors may download the revised project documents from the Contracts and Specifications Website. Contractors that previously registered for the project are advised to register for the re-advertised project.

The amount programmed for this contract is \$1,340,000. The location and description of the proposed work are as follows:

The proposed project is located in Pima County, within the San Xavier District of the Tohono O'Odham Nation, on the north side of San Xavier Road at I-19 Milepost 57.0. The proposed work consists of constructing a new asphaltic concrete pathway and concrete sidewalk, landscaping, signing, striping, and other related work.

This project is located on a Native American Reservation, in the (San Xavier District of the Tohono O'Odham Nation area, which may subject the contractor to the laws and regulations of the San Xavier District of the Tohono O'Odham Nation and its TERO office. Contractors are advised to make themselves aware of any taxes, fees or any conditions that may be imposed by the San Xavier District of the Tohono O'Odham Nation on work performed on the Reservation.

The time allowed for the completion of the work included in the Construction Phase of the contract will be 120 calendar days.

The time allowed for the completion of the work included in the Landscape Establishment Phase of the contract will be 720 calendar days.

The Arizona Department of Transportation, 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.

Contract documents, and other project documents, if applicable, are available as electronic files, at no charge, from the Department's website through the ADOT Contracts and Specifications Group (<https://azdot.gov/business/contracts-and-specifications/current-advertisements>).

Documents will be available within one week following the advertisement for bids.

To submit a valid bid, the bidder must (1) have prequalification from the Department as necessary for the project, and (2) be included on the project Plansholder List as a Prime.

The Application for Contractor Prequalification may be obtained from the Contracts and Specifications website.

This project requires electronic bidding. If a request for approval to bid as a Prime Contractor is received less than five working days prior to bid opening, the Department cannot guarantee the request will be acted on.

This contract is subject to the provisions of Arizona Revised Statutes Section 42-5075 -- Prime contracting classification; exemptions; definitions.

No award will be made to any contractor who is not a duly licensed contractor in accordance with Arizona Revised Statutes 32-1101 through 32-1170.03.

All labor employed on this project shall be paid in accordance with the minimum wage rates shown in the General Wage Decision. These rates have been determined in accordance with the requirements of the law and issued by the Secretary of Labor for this project. The wage scale is on file in Contracts and Specifications Section and copies may be obtained at all reasonable times.

Persons that require a reasonable accommodation based on language or disability should contact ADOT's Contracts and Specifications Office by phone (602) 712-7221. Requests should be made as early as possible to ensure the State has an opportunity to address the accommodation.

Las personas que requieran asistencia (dentro de lo razonable) ya sea por el idioma o discapacidad deben ponerse en contacto con ADOT (602) 712-7221.

The bidder shall provide an electronic proposal guaranty payable to the Arizona Department of Transportation for 10 percent of the amount of the bid.

Prior to the bid opening date, any questions pertaining to the project documents shall be submitted to the Department in a written format through the Bid Express (Bidx) website at <https://www.bidx.com/az/lettings>. Questions shall be submitted through the Questions and Answers (Q&A) link located within the corresponding letting date and project proposal number links. The Department may not answer all questions, and any decision on whether a question is answered will be within the sole discretion of the Department. Any questions received less than three working days prior to the bid opening date may not be answered.

The Engineering Specialist assigned to this project is: JALAL KAMAL, jkamal@azdot.gov, any correspondence with the Engineering Specialist is subject to posting onto Bidx through the project's Q&A link. Answers to questions will not be given verbally, but will be posted exclusively to the Bidx website.

Brahama Singh, PE,
Group Manager,
Contracts & Specifications

Project Advertised on: September 11, 2026

SPECIAL PROVISIONS

FOR

ARIZONA PROJECT

0000 PM ITO SL698 01C

ITO-0(204)T

SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION

SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19

CONSTRUCT MULTI-USE PATHWAY

PROPOSED WORK:

The proposed project is located in Pima County, within the San Xavier District of the Tohono O'Odham Nation, on the north side of San Xavier Road at I-19 Milepost 57.0. The proposed work consists of constructing a new asphaltic concrete pathway and concrete sidewalk, landscaping, signing, striping, and other related work.

PROFESSIONAL SEALS:

This book of specifications and related contract documents represents the efforts of the following organizations:

- (1) AECOM
- (2) J2 Design.
- (3) ADOT Roadside Development

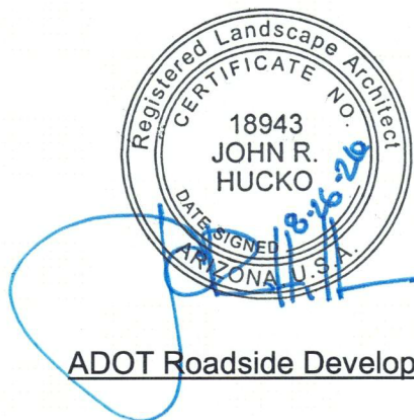
A representative of each firm or group has affixed his/her professional seal below, which attests to those portions of these specifications, which relate to the subject area listed below:



AECOM



J2 Design



ADOT Roadside Development

(SPC00FA,03/19/26)

SPECIFICATIONS:

The work embraced herein shall be performed in accordance with the requirements of the following separate documents:

Arizona Department of Transportation, Standard Specifications for Road and Bridge Construction, Edition of 2021,

Arizona Department of Transportation, Roadway Engineering Group, Construction Standard Drawings, listed in the project plans, and available on the Department's website,

Arizona Department of Transportation, Traffic Engineering Group, Manual of Approved Signs, available on the Department's website,

Arizona Department of Transportation, Traffic Engineering Group, Temporary Traffic Control Design Guidelines, dated April, 2025, available on the Department's website,

Manual on Uniform Traffic Control Devices for Streets and Highways, 2023 edition and Arizona Supplement to the 2023 edition, dated January 2026,

The Proposal Pamphlet which includes the following documents:

These Special Provisions,

Appendix A, Western Burrowing Owl Awareness,

Required Contract Provisions Federal-Aid Construction Contracts (Form FHWA 1273 Revised October 23, 2023),

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246), July 1, 1978, Revised November 3, 1980 and Revised April 15, 1981,

Title VI / Non-Discrimination Assurances,
Appendix A
Appendix E,

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246), July 1, 1978, Revised November 3, 1980 and Revised April 15, 1981,

Equal Employment Opportunity Compliance Reports, 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 January 1, 2005, Revised August 1, 2005, and Revised March 1, 2015,

Wage Determination Decision,

Bidding Schedule,

Proposal,

Surety (Bid) Bond, 12-1303,

Certification With Regard to the Performance of Previous Contracts or Subcontracts Subject to the Equal Opportunity Clause and the Filing of Required Reports, Federal Aid Projects, April, 1969, Rev. July, 2003,

Certification With Respect to the Receipt of Addenda,

Participation in Boycott of Israel Certification Form,

Forced Labor of Ethnic Uyghurs Ban Certification Form, Rev. November 2022.

BID SUBMISSION:

In submitting a bid, the bidder shall completely execute the following documents:

Proposal,

Bidding Schedule,

Surety (Bid) Bond, 12-1303,

Certification With Regard to the Performance of Previous Contracts or Subcontracts Subject to the Equal Opportunity Clause and the Filing of Required Reports, Federal Aid Projects, April, 1969, Rev. July, 2003,

Certification With Respect to the Receipt of Addenda,

Participation in Boycott of Israel Certification Form, and

Forced Labor of Ethnic Uyghurs Ban Certification Form, Rev. November 2022.

PROPOSAL GUARANTY:

Each bidder is advised to satisfy itself as to the character and the amount of the proposal guaranty required in the Advertisement for Bids.

CONTRACT DOCUMENTS:

The bidder to whom an award is made will be required to execute a Performance Bond and a Payment Bond, each in 100 percent of the amount of the bid, an Insurance Certificate and the Contract Agreement.

A copy of these documents is not included in the Proposal Pamphlet; however, each bidder shall satisfy itself as to the requirements of each document.

The documents, approved by the Department of Transportation, Highways Division, are identified as follows:

Statutory Performance Bond, 12-1301, September, 1992

Statutory Payment Bond, 12-1302, September, 1992

Contract Agreement, 12-0912, August, 2000

Certificate of Insurance, 12-0100, June, 1998

A copy of each document may be obtained by making a request to Contracts & Specifications.

MATERIAL AND SITE INFORMATION:

Projects requiring materials, excavation, or site investigation may have additional information available concerning the material investigations of the project site and adjacent projects. This information, when available and applicable, may be examined in the Office of the Bridge Group-Geotechnical Services, located at 205 S. 17th Avenue, Phoenix, AZ 85007-3212. The contractor may contact Bridge Group at (602) 712-7481 to schedule an appointment to examine the information. This information will not be attached to the contract documents.

(EPRISENGL-IFR)

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 Code of Federal Regulation Part 26 (49 CFR Part 26), as revised by the USDOT DBE Interim Final Rule (IFR) issued October 3, 2025 (hereinafter referred to as IFR).

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, as revised by the IFR.

It is the policy of the Department to ensure that DBEs (hereinafter DBE or DBE firm), 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:

- (A) To ensure nondiscrimination in the award and administration of USDOT-assisted contracts;
- (B) To create a level playing field on which DBEs can compete fairly for USDOT-assisted contracts;
- (C) To ensure that the DBE program operates in a nondiscriminatory manner and without regard to race or sex, while maximizing efficiency of service;
- (D) To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are counted as DBEs;
- (E) To help remove barriers to the participation of DBEs in USDOT-assisted contracts,
- (F) To assist in the development of firms that can compete successfully in the market place outside the DBE program; and
- (G) 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.

2.0 Assurances of Non-Discrimination:

The contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, sex or national origin in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 as revised by the IFR 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 State deems appropriate, which may include, but are not limited to:

- (A) Withholding monthly progress payments;
- (B) Assessing sanctions; and/or
- (C) 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 in 49 CFR Part 26.55. That definition is incorporated herein by reference.
- (B) Disadvantaged Business Enterprise (DBE):** A DBE, as defined in 49 CFR Part 26.5, is a for-profit small business concern which meets both of the following requirements:
 - (1) Is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged; and,
 - (2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.
- (C) Joint Check:** a two-party check between a subcontractor, DBE and/or non-DBE, a prime contractor and the regular dealer of material supplies.
- (D) 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.

(E) 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.

(F) Non-DBE: any firm that is not a DBE.

(G) DBE Conscious: a measure or program that is focused specifically on assisting only DBEs.

(H) DBE Neutral: a measure or program that is, or can be, used to assist all small businesses.

(I) 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.

(J) Socially and Economically Disadvantaged Individuals: Socially and Economically Disadvantaged Individuals is defined in 49 CFR Part 26.5, as revised by the IFR. That definition is incorporated here.

- (1) Any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who a certifier finds to be socially and economically disadvantaged on an individual basis.
- (2) A determination that an individual is socially and economically disadvantaged must not be based in whole or in part on race or sex. For that reason, all applicants shall qualify as socially and economically disadvantaged if they can demonstrate that they can meet the relevant criteria described in 49 CFR Part 26.67.
- (3) Being born in a particular country does not, standing alone, mean that a person is necessarily socially and economically disadvantaged.

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, Ste. 101, Mail Drop 154A
Phoenix, AZ 85007
Phone (602) 712-7761
Email: contractorcompliance@azdot.gov
Website: www.azdot.gov/business/business-engagement-and-compliance

4.01 Business Development Program:

The Department has established the Business Development Program as an initiative to encourage and develop disadvantaged businesses in the highway construction industry. The Department is committed to providing new, emerging, developmental and transitional DBEs with general and firm-specific training and technical assistance. The Department intends for this assistance to aid DBEs to become competitive within the heavy highway and construction industry market places. In particular, the Department's DBE Supportive Services Program (DBE/SS) is designed to work in collaboration with stakeholder organizations (including departments and agencies of State and Federal Governments, small business organizations, tribal governments, profit and nonprofit corporations) to help DBEs to successfully compete for highway construction projects and become self-sufficient. The program provides educational opportunities for DBEs regarding current market conditions, Federal regulatory compliance, and best business practices. These efforts are reinforced with one-on-one business counseling for DBEs certified in areas that directly support Federal-aid highway projects, small group workshops, conferences, business expositions, regular in-person training opportunities, and regular virtual training opportunities. For guidance regarding this program, refer to the Business Development Program Guidelines available on the BECO website at <https://azdot.gov/business/business-engagement-and-compliance/dbe-supportive-services/business-development-program/disadvantaged-business-enterprise-dbe-program/dbe>.

The Business Development Program is intended to increase legitimate DBE activities. The program operates in conformity with the Federal DBE rules and regulations. The Department's DBE/SS participants may not circumvent the Federal DBE rules or regulations.

5.0 Applicability:

During the transition period, the IFR provides that until the Arizona Unified Certification Program (UCP) completes the recertification process, the Department may not 1) set any DBE contract goals or 2) count any participation towards its overall DBE goal.

The Department has established an overall annual goal for DBE participation on Federal-aid contracts. The Department intends for the goal to be met with a combination of DBE conscious efforts and DBE neutral efforts once the DBE recertification process is completed in accordance with the IFR. DBE conscious participation occurs where the contractor uses a percentage of DBEs, as defined herein, to meet the contract-specified goal. DBE 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, as revised by the IFR describes DBE 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 provisions are applicable to all bidders.

6.0 Certification and Registration:

6.01 DBE Certification:

Certification as a DBE shall be predicated on:

- (A) The completion and execution of an application for certification as a "Disadvantaged Business Enterprise".
- (B) 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.
- (C) The submission of any additional information which the Department or the applicable Arizona Unified Certification (UCP) agency may require to determine the firm's eligibility to participate in the DBE program.
- (D) The information obtained during the on-site visits to the offices of the firm and to active job-sites.

Application Submission. Applications for Disadvantaged Business Enterprise (DBE) certification may be filed with the Department or the applicable UCP agency at any time through the Arizona Unified Transportation Registration and Certification System (AZ UTRACS) website at <https://utracs.azdot.gov/Home>.

Implementation of Revised Federal Standards. Effective October 3, 2025, all certification applications and renewals shall be reviewed and processed in accordance with the 49 CFR Part 26 as revised by the IFR. The revised rule modifies certification standards, documentation, and evidentiary requirements applicable to determinations of social and economic disadvantage, business size, ownership, and control.

Transition Period. During the transition period in which the Department and participating UCP agencies are updating internal procedures and the AZ UTRACS system to implement the revised rule, certification applications may continue to be submitted through the existing online platform. Applicants submitting applications during this period may be required to furnish additional or supplemental documentation consistent with the revised certification criteria upon system update or upon request by the certifying agency.

All applicants, whether filing initial or renewal applications, shall comply with any new or amended federal documentation requirements that become effective under 49 CFR Part 26 as revised by the IFR, including but not limited to personal narrative statements, financial disclosures, and supporting affidavits required to demonstrate eligibility under the revised standards.

The Department is a member of the AZ Unified Certification Program (AZUCP). During the transition period, the list of firms listed in AZ UTRACS were certified prior to October 3, 2025, not in accordance with the IFR, and therefore do not count for DBE credit, unless otherwise noted in AZ UTRACS. The list indicates contact information and specialty for each DBE firm and may be sorted in a variety of ways. However, the Department does not guarantee the accuracy and/or completeness of this information, nor does the Department 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, as revised by the IFR. 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, the Department's DBE Program incorporates contracting requirements to facilitate participation by Small Business Concerns (SBCs) in federally assisted contracts. SBCs are for-profit businesses registered 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 encourages contractors to utilize small businesses that are registered in AZ UTRACS on their contracts, in addition to DBEs meeting the

certification requirement in accordance with the IFR. However, SBCs that are not DBEs will not be counted toward DBE participation.

SBCs can register online at the AZ UTRACS website at <http://utracs.azdot.gov/Home/>. The Department's 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:

The Department 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. The Department encourages prime contractors to use such institutions on USDOT assisted contracts. However, use of DBE financial institutions will not be counted toward DBE participation.

The Department 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. 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. When the Department's offices are closed for all or part of the last day, the period extends to the next day on which the Department's offices are 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 Blank:

11.0 Bidders/Proposers List and AZ UTRACS Registration Requirement:

Under 49 CFR 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. The Department 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://utracz.azdot.gov/Home/> a centralized database for companies that seek to do business with the Department. This information will be maintained as confidential to the extent allowed by Federal and State law.

All prime contractors, subcontractors, and DBEs shall: 1) register in AZ UTRACS, and 2) maintain their profile with current and accurate firm information. Bidders may verify that their firm and each subcontractor is registered using the AZ UTRACS website.

Bidders may obtain additional information at the AZ UTRACS website or by contacting BECO.

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 BECO 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 CONFIRMATION EMAIL TO BECO 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:

During the transition period, the IFR provides that until the UCP completes the recertification process, the Department may not 1) set any DBE contract goals or 2) count any participation towards its overall DBE goal. The Department will not be counting any DBE conscious or DBE neutral efforts towards its overall DBE goal during this transitional period.

The Department has not established contract goals for DBE participation in this contract. Contractors are still encouraged to employ reasonable means to obtain DBE neutral efforts. Contractors must retain records in accordance with these DBE specifications. The contractor is notified that this record keeping is important to the Department so that it can track DBE participation where only DBE neutral efforts are employed.

13.0 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 Subsection 109.06(B)(5) of the specifications.

14.0 Crediting DBE Participation:

14.01 General Requirements:

During the transition period, the IFR provides that until the UCP completes the recertification process, the Department may not count any participation towards its overall DBE goal. This applies to both DBE conscious and DBE neutral efforts.

To count toward DBE participation, the DBE firm must be certified 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.

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.

The contractor bears the responsibility to determine whether the DBE possesses the proper contractor's license(s) to perform the work.

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 agreements such as: subcontract, purchase order, hourly rate, and rate per ton.

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.

The contractor may credit second-tier subcontracts issued to DBEs by non-DBE subcontractors. Any second-tier subcontract to a DBE 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 DBE participation 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 towards DBE participation.

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.

14.02 Effect of Loss of DBE Eligibility:

If a DBE or a DBE prime contractor is deemed ineligible, decertified, or suspended by the Department in accordance with 49 CFR Part 26.87 and 49 CFR Part 26.88, the following provisions shall apply:

- (A) If a DBE firm loses its DBE eligibility because the DBE firm was acquired by a non-DBE firm, no work performed by the DBE firm after the Decision Date will be counted toward DBE participation.
- (B) If a subcontract, contract, or supplier arrangement has been executed before the Decision Date, work performed by the DBE firm will be counted toward DBE participation.
- (C) If neither paragraph (A) nor paragraph (B) above applies, the work performed by the DBE firm after the Decision Date will be counted toward DBE participation.
- (D) If the contractor extends or adds work to the DBE firm's subcontract, that work will not be counted towards DBE participation unless the contractor has obtained prior approval from the Department for DBE credit. Any requests to extend or add work to the DBE firm's subcontract to count towards DBE participation shall be submitted using the request form, made available on BECO's website at <https://azdot.gov/business/business-engagement-and-compliance/dbe-contract-compliance/contract-specs-and-forms>, to extend Decertified DBE contract for DBE credit.
- (E) The Department will consent to such DBE credit only if the added work is within the foreseeable range of added work, given the circumstances of the original DBE contract.
- (F) For the purposes of this subsection, "Decision Date" means the date the Department notifies the DBE that it has become ineligible, decertified, or suspended under 49 CFR Part 26.87(c)(4), (g).

14.03 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.

14.04 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.

14.05 Commercially Useful Function:

A prime contractor can credit expenditures to a DBE subcontractor only if the DBE performs a commercially useful function (CUF) on the contract.

In conformity with 49 CFR Part 26.55(c), 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 Department 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 Department 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 within normal industry practice for the type of work involved, the Department 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 Department will determine if the firm is performing a CUF given the type of work involved and normal industry practices.

The Department 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 Department's decision.

Decisions on CUF may be appealed to the State Engineer. The appeal must be in writing and personally delivered or sent by certified mail, return receipt requested, to the State Engineer. The appeal must be received by the State Engineer no later than seven calendar days after the decision of BECO. BECO's decision remains in effect unless and until the State Engineer reverses or modifies BECO's decision. The State Engineer will promptly consider any appeals under this subsection and notify the contractor of the State Engineer's findings and decisions. Decisions on CUF matters are not appealable to USDOT.

The Department 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 Department's staff will make every effort not to disrupt work on the project.

14.06 Trucking:

In conformity with 49 CFR Part 26.55(d), the Department 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.

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 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. DBE participation 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.

14.07 Materials and Supplies:

In conformity with 49 CFR Part 26.55(e), the Department will credit expenditures with DBEs for material and supplies towards DBE participation as follows:

- (A) If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies is credited.
 - (1) A DBE manufacturer is defined as: a firm that owns, or leases, and operates a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract, and of the general character described by the specifications.
 - (2) Manufacturing includes blending or modifying raw materials or assembling components to create the product to meet contract specifications. When a DBE makes minor modifications to the materials, supplies, articles, or equipment, the DBE is not a manufacturer. Minor modifications are additional

changes to a manufactured product that are small in scope and add minimal value to the final product.

- (B) If the materials or supplies are purchased from a DBE regular dealer, 60 percent of the cost of the materials or supplies, (including transportation costs), is credited.
- (1) A DBE regular dealer is defined as: a firm that owns, or leases, and 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 sufficient quantities, and regularly sold or leased to the public in the usual course of business.
- (a) 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.
- (b) Items kept and regularly sold by the DBE are of the "general character" when they share the same material characteristics and application as the items specified by the contract.
- (2) A firm may be a DBE regular dealer in such bulk items as petroleum products, steel, concrete or concrete products, stone or asphalt without owning and operating a place of business, as provided above, if the person both owns and operates distribution equipment used to deliver the products. Any supplementing of regular dealers' own distribution equipment must be by a long-term operating lease, and not on an ad-hoc or contract-by-contract basis.
- (3) A DBE supplier performs a CUF as a regular dealer and receives credit for 60 percent of the cost of materials or supplies, including transportation cost, when all, or at least 51 percent of, the items under a purchase order or subcontract are provided from the DBE's inventory, and when necessary, any minor quantities delivered from and by other sources are of the general character as those provided from the DBE's inventory.
- (4) A DBE supplier of items that are not typically stocked due to their unique characteristics (e.g., limited shelf life or items ordered to specification) should be considered in the same manner as a regular dealer of bulk items as described above. If the DBE supplier of these items does not own or lease distribution equipment, as described above, it is not a regular dealer.
- (5) Packagers, brokers, manufacturers' representatives, or other persons who arrange, facilitate or expedite transactions are not regular dealers within the meaning of this paragraph and the paragraph above.

- (C) If the materials or supplies are purchased from a DBE distributor that neither maintains sufficient inventory nor uses its own distribution equipment for the products in question, 40 percent of the cost of materials or supplies (including transportation costs) count for credit.
- (1) A DBE distributor is defined as: an established business that engages in the regular sale or lease of the items specified by the contract. A DBE distributor assumes responsibility for the items it purchases once they leave the point of origin (e.g., a manufacturer's facility), making it liable for any loss or damage not covered by the carrier's insurance.
 - (2) A DBE distributor performs a CUF when it demonstrates ownership of the items in question and assumes all risk for loss or damage during transportation, evidenced by the terms of the purchase order or a bill of lading (BOL) from a third party, indicating Free on Board (FOB) at the point of origin or similar terms that transfer responsibility of the items in question to the DBE distributor.
 - (3) If paragraph (1) and paragraph (2), above, are met, DBE distributors may receive 40 percent for drop-shipped items.
 - (4) Terms that transfer liability to the distributor at the delivery destination (e.g., FOB destination), or deliveries made or arranged by the manufacturer or another seller do not satisfy this requirement.
- (D) With respect to materials or supplies purchased from a DBE which is neither a manufacturer, a regular dealer, nor a distributor, the following standards shall apply:
- (1) The Department will credit the entire amount of the fees or commissions charged by the DBE for: (1) assistance in the procurement of the materials and supplies, or (2) fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE participation.
 - (2) The Department will only credit the fees or commissions charged by the DBE if the Department determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services.
 - (3) The cost of the materials and supplies themselves may not be counted toward DBE participation.
- (E) The Department will credit expenditures with DBEs for material and supplies (e.g. whether a firm is acting as a regular dealer, distributor or a transaction facilitator) towards DBE participation on a contract-by-contract basis.

- (F) The fact that a DBE firm qualifies under a classification (manufacturer, regular dealer, distributor or supplier) for one contract does not mean it will qualify for the same classification on another contract.
- (G) The bidder shall be responsible for verifying whether a DBE qualifies as a DBE manufacturer, regular dealer, distributor or supplier.
 - (1) For each DBE firm listed as a regular dealer or distributor, the bidder must assess a DBE firm's eligibility for 60 or 40 percent credit, respectively, of the cost of materials and supplies based on its demonstrated capacity and intent to perform as a regular dealer or distributor.
 - (2) To receive credit toward DBE participation, the bidder shall use and submit the form made available on BECO's website at <https://azdot.gov/business/business-engagement-and-compliance/dbe-contract-compliance/contract-specs-and-forms>, to affirm the DBE firm's capacity and intent to perform as a regular dealer or distributor.

15.0 Joint Checks:

15.01 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.

- (A) 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.
- (B) 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.
- (C) A material or supply contract may not bear an excessive ratio relative to the DBE subcontractor's normal capacity.
- (D) 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.

- (E) 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.
- (F) 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.
- (G) The DBE must be responsible for receiving the check from the prime contractor and delivering the check to the supplier.
- (H) 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.

15.02 Procedure and Compliance:

- (A) The Business Engagement and Compliance Office 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 BECO through email within seven calendar days from the time the subcontract is executed.
- (B) After obtaining authorization 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.
- (C) 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 BECO, 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 Department in the case of any change from the approved joint check arrangement.
- (D) Any failure to comply will be considered by the Department 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, reduction or loss of prequalification, debarment, or other remedies which may prevent future participation by the offending party.

16.0 Certification of Final DBE Payments:

DBE participation on the contract is measured by actual payments made to the DBEs. 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 Engineer no later than 30 days after the DBE completes its work.

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 Engineer and BECO.

17.0 False, Fraudulent, or Dishonest Conduct:

In addition to any other remedies or actions, the Department will bring to the attention of the USDOT 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.

(TITLE VI, 08/19/21)

STANDARD TITLE VI SPECIFIC ASSURANCES:

The Arizona Department of Transportation, 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.

(TRIBE, 04/15/92)

UTILIZATION OF NATIVE AMERICANS:

The project is located on San Xavier District of the Tohono O'odham Nation, which may subject the contractor to the laws and regulations of the San Xavier District of the Tohono O'odham Nation. Contractors shall make themselves aware of any labor requirements, taxes, fees, licenses, permits or conditions that may be imposed by the San Xavier District of the Tohono O'odham Nation on work performed in the area.

On other projects in this area, the utilization of Native Americans has developed a reservoir of capable, trained workers. The contractor shall contact the office of Tribal Labor Relations listed below for assistance in hiring such workers. The contractor shall give preference in hiring in as many workers indigenous to the area as it can properly utilize in the processing of the work. The contractor shall provide a manpower projection identifying the type of crafts and trades that it expects to utilize, the approximate date that it expects to start work, and the name of one of its employees to be its contact.

The tribal contact office for labor relations is identified as follows:

Tribal Employment Rights Office

P.O. Box 40
AZ, 85634
Office: (520) 383-3304
Fax: (520) 383-2781
Email: TERO@toua.net

GENERAL REQUIREMENTS:

BLM Material Sources:

If the contractor elects to pursue the use of material sources on BLM land under Title 30 Code of Federal Regulations, it is at the contractor's sole risk, and the Department bears no responsibility for any delays or costs associated with the request to use material sources on BLM Land.

The Department will not request or pursue any "free-use permit" under Title 23 Code of Federal Regulations or any other arrangement with BLM on this project.

No extension in contract time or compensation will be granted for any attempt by the contractor to utilize BLM land.

Local Agencies Standards:

The plans and these Special Provisions reference certain Standard Details promulgated by a local agency or agencies. Any local agency's Standard Specifications referenced on the standard details shall not be used unless they are so designated by these Special Provisions.

All Portland cement concrete and aggregate base shall conform to ADOT Standard Specifications. Whenever reference is made to structural concrete and aggregate base in the local agency's specifications, the reference shall be construed to mean Class S concrete and Class 2 aggregate base, respectively.

When not included in the project documents, copies of the latest Standard Specifications and Details for each local agency will be available on the local agency's website.

ENVIRONMENTAL MITIGATION MEASURES:

The contractor's commitments are identified in the Environmental, Permits, Issues, and Commitments (EPIC) Plan Sheet 1F. The contractor shall follow the requirements specified in the EPIC plan sheet 1F, Subsection 104.16 of the specifications and these Special Provisions.

Transition of Select AASHTO Standard Test Method to Arizona Test Method Equivalent:

Whenever reference is made in the specifications to an AASHTO Test Method, the reference shall be construed to mean it's equivalent Arizona Test Method as listed in the table below.

TEST METHOD TRANSITION TABLE	
AASHTO Standard	Equivalent Arizona Test Method
R 66	103
R 97	104
R 90	105
T 11, T 27	201
T 85	210
T 84	211
T 335	212
T 99	225
	226
T 224	227
T 191	230
T 272	232
T 310	235
T 288, T 289	236
T 176	242
T 99	245
T 272	246
T 304 Method A	247
T 24	317
T 329	406
R 68, T 245	410
T 355	412
T 166	415

R 47	416
T 209	417
T 287	421
T 269	424
T 308	427
	428

Archaeological Monitoring:

Archaeological monitoring shall be conducted during all ground-disturbing activities within the project area by a San Xavier District of the Tohono O'odham Nation archaeologist. The San Xavier District of the Tohono O'odham Nation contact number for monitor program (520) 573-4055) shall be notified 10 days before the start of ground-disturbing activities to arrange for an archaeological monitor. The San Xavier District will be responsible for the monitoring costs.

(101DEFN, 04/21/22)

SECTION 101 DEFINITIONS AND TERMS:

101.02 Definitions:

Acceptance: of the Standard Specifications is hereby deleted:

Characteristic: of the Standard Specifications is revised to read:

A measurable or an observable property of a material, product, or item of construction.

City, County, Township, or Town: of the Standard Specifications is hereby deleted:

Contract Bonds (Performance Bond and Payment Bond): the title and text of the Standard Specifications is revised to read:

Contract Bonds:

Surety Bonds that include Performance Bond and Payment Bond.

Highway, Street, or Road: of the Standard Specifications is revised to read:

A general term denoting a public way for purposes of travel, vehicular, pedestrian or by other means, including the entire area within the right-of-way.

Roadbed: of the Standard Specifications is revised to read:

The graded portion of a highway, prepared as a foundation for the pavement structure and shoulders.

Roadside Development: of the Standard Specifications is revised to read:

Activities which provide for the preservation of landscape materials and features; the rehabilitation and protection against erosion of all areas disturbed by construction through seeding, sodding, mulching and the placing of other ground covers; or such planting and other improvements as may increase the effectiveness and enhance the appearance of the highway.

State: of the Standard Specifications is revised to read:

The State of Arizona, acting through its authorized representatives.

(102BID, 03/19/26)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS: of the Standard Specifications is revised to read:

102.01 Contract Documents:

(A) General:

The Contract Documents, including but not limited to, Advertisement for Bids, Project Plans, and Proposal Pamphlets will be available in electronic format, on the ADOT Contracts and Specifications Group website. Any interested party may access the advertised Contract Documents.

(B) Advertisements for Bids:

The advertisement for bids may contain the following information:

- Programmed Amount,
- Project number and name of highway,
- Route number and mileposts,
- Date and time of opening of bids,
- Location of the project,
- General description of work,
- Specified contract time for completion of contract work,
- Statement of proposal requirements,
- Manner in which project plans and specifications may be obtained,
- Type and amount of proposal guaranty.

(C) Proposal Pamphlet:

The Proposal Pamphlet will include the location and general description of the contemplated construction, an approximate estimate of the quantities and types of work to be performed and/or materials to be furnished, a schedule of bid items for which unit prices are invited, the specified time for completion, any applicable Special Provisions or supplemental requirements, and all necessary bidding documents.

102.02 Prerequisites for Bidding:

(A) General:

To submit a valid bid, the bidder shall:

- (1) Have prequalification from the Department as necessary for the project, in accordance with Subsection 102.02(B) of the specifications; and
- (2) Be included on the project Plansholder List as a Prime in accordance with Subsection 102.02(C) of the specifications.

(B) Prequalification of Bidders:

Prior to submitting a bid, the bidder will (unless waived by the Department) be required to be prequalified with the Department to bid on the project. The submission of Prequalification information and determination of Prequalification shall be in accordance with the requirements of the Rules for Prequalification of Contractors as approved and adopted by the Department.

(C) Plansholder List:

It is the bidder's responsibility to ensure that their firm is on the Plansholder List as a Prime prior to submitting a bid.

Firms can register electronically requesting placement on the project Plansholder List as a Prime contractor as follows:

- (1) Go to the ADOT Contracts and Specifications Group Website;
- (2) Select "Current Advertisements";
- (3) Identify the project of interest;
- (4) Click on the "Register" icon;
- (5) Select the "Bidder" radio button;

- (6) Complete all required fields;
- (7) Click "Save". This submits the request to the Department; and
- (8) If all required information is provided, the "ADOT C&S Advertisement Registration Confirmation" Screen will appear. An email will also be sent to the email address provided acknowledging the receipt of the request.

Requests to be included on the Plansholder List as a Prime will be evaluated by the Department to determine whether the bidder is prequalified for the project. The Department cannot guarantee that requests to be on the Plansholder List will be considered if the request is submitted less than five working days prior to the bid opening. The Department will send an email to the email address provided notifying the contractor of the results of their request.

The Department's email will state whether the request was approved or denied. More information regarding the Department's decision may be obtained by contacting the ADOT Contracts and Specifications Group.

If an individual from a firm submits a duplicate request to be placed on the Plansholder List, the request will be denied. The Department will register the contact person listed on the duplicate request to receive email notices of updates to the project. The Department will send an email to the email address provided notifying the contractor of the results of their request.

(D) Registration for Notifications:

Subcontractors, Vendor and other interested parties may electronically register to receive email notifications regarding updates or changes to specific advertised contracts.

To register:

- (1) Go to the ADOT Contracts and Specifications Group Website;
- (2) Select "Current Advertisements";
- (3) Identify the project of interest;
- (4) Click on the "Register" icon;
- (5) Select the "Other" radio button, as applicable;
- (6) Select the "Yes" in response to the prompt "Are you interested in registering to be notified about any changes made to this advertisement?";

- (7) Complete all required fields;
- (8) Click "Save". This submits the request to the Department; and
- (9) If all required information is provided, the "ADOT C&S Advertisement Registration Confirmation" Screen will appear and a confirmation email will be sent to the email address provided.

All registered parties will receive notifications when changes are made to the associated contract advertisement.

102.03 Suspension from Bidding:

The Department may suspend any person and any subsidiary or affiliate of any person from further bidding to the Department and from being a subcontractor or a 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, or 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;
- (B) If the Department makes a finding of any of the above or finds that the contractor is not a Responsible Bidder or a Responsible Contractor; or
- (C) If the Department determines that a contractor, subcontractor, or supplier has repeatedly or willfully failed to comply with federal or state immigration laws.

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.

102.04 Availability of Documents:

The following documents, if applicable, will be available in electronic format on the ADOT Contracts and Specifications Group website:

- A. Project Plans.
- B. Advertisement for Bids.
- C. Proposal Pamphlet.
- D. Cross Sections.
- E. Earthwork Report.
- F. Other Available Reports.
- G. Existing Ground Digital Terrain Model (DTM).
- H. Design Ground Digital Terrain Model (DTM).
- I. Survey Control Sheet.

The project plans, proposal pamphlet, cross sections, earthwork report, survey control sheet, and any applicable reports are provided in PDF format. The Department makes no representation or warranties as to the compatibility, usability, or readability of the PDF documents with any system, software, hardware, or application package other than that on which the files were originally saved. The contractor bears the sole risk of any modifications, manipulations, or alterations to the plans, proposal pamphlet, and any applicable reports.

The existing ground DTM and the design DTM, if applicable, are provided in either DTM or DGN files for informational purposes only. The DTMs are not part of the contract documents. The contractor's use of the information in the DTMs is at the contractor's sole risk. The Department makes no representation or warranties as to the compatibility, usability, or readability of the DTMs with any system, software, hardware, or application package other than that on which the files were originally prepared. The version of Microstation used to save the DTMs is indicated at <https://azdot.gov/business/engineering-and-construction/computer-aided-design-and-drafting-cadd>.

The Department is providing the available electronic project documents to bidders for informational purposes in conjunction with work or services to be provided to the Department under the contract. Any use of the electronic files for any purposes other than for this project is prohibited.

102.05 Plansholder Eligibility:

The Department reserves the right to disqualify a prequalified contractor from being a Plansholder for any of the following reasons:

- (A) Lack of competency or adequate machinery, plant and other equipment, as revealed by the financial statement and experience questionnaires required under Subsection 102.02 of the specifications.
- (B) Incomplete work which, in the judgment of the Department, might hinder or prevent the prompt completion of additional work if awarded.
- (C) Failure to pay, or settle satisfactorily, all bills due for work on other contracts.
- (D) Failure to comply with any qualification regulations of the Department.
- (E) Default under previous contracts.
- (F) Unsatisfactory performance on previous work.
- (G) Entering into any contract, combination, conspiracy, or other unlawful act in restraint of trade or commerce.
- (H) Knowingly and willfully falsifying, concealing, or covering up a material fact by trick, scheme, or device.
- (I) Making false, fictitious, or fraudulent statements or representations.
- (J) Making or using a false writing or document knowing it to contain a false, fictitious, or fraudulent statement or entry.
- (K) Misrepresentation or false statement on any application for bonding.
- (L) Misrepresentation or false statement on any application for prequalification.
- (M) Lack of sufficient ability or integrity to complete the contract.

102.06 Interpretation of Quantities in Bidding Schedule:

The quantities appearing in the bidding schedule, except as provided elsewhere, are approximate only and are prepared for the comparison of bids. Payment to the contractor will be made only for the actual quantities of work performed and accepted or materials furnished in accordance with the requirements of the contract. The scheduled quantities of work to be done and materials to be furnished may each be increased, decreased, or omitted as hereinafter provided in Subsection 104.02 of the specifications.

102.07 Examination of Plans, Specifications and Site of Work:

The bidder shall examine the site of the proposed work and the contract before submitting a Proposal. If no site investigation is performed, the bidder is responsible for

all site conditions that should have been discovered had a reasonable site investigation been performed. The submission of a Proposal will be considered conclusive evidence that the bidder is satisfied with the conditions to be encountered in performing the work and as to the requirements of the proposed contract.

The bidder shall take no advantage of any apparent error or omission in the plans, bid schedule items, estimated quantities, specifications, or other contract documents. In the event the bidder discovers such an error or omission, the bidder shall immediately notify the Department. The Department will then make such corrections and interpretations as may be deemed necessary.

Any request for explanation of the meaning or interpretations of the contract shall be submitted in adequate time to allow a reply to reach all bidders before submission of their Bid Proposal. If the Department determines interpretations or explanations are warranted, the response will be issued, if necessary, through an addendum to the contract documents, and will be made available to all prospective bidders before the time set for opening of Proposals.

The Department will not be bound by any statement or representation concerning conditions or description of the work unless they are included in the contract. Oral explanations, interpretations, or instructions given before the opening of the bids by Department employees or agents are not binding.

102.08 Preparation of Proposal:

(A) General:

The bidder shall prepare and submit its proposal using Department-approved bid preparation software.

Proposals shall be prepared and submitted in accordance with the requirements of Subsection 102.08(B) of the specifications.

The bidder shall submit its proposal using the electronic bid process described herein.

(B) Electronic Submittal:

(1) General:

In order to submit a bid electronically, a firm shall have obtained a bidder identification number from the Department, at the office of ADOT Contracts and Specifications Group, 205 South 17th Avenue, Maildrop 121F, Phoenix, AZ 85007, phone (602) 712-7221.

In addition, bidders shall subscribe to Info Tech, Inc., doing business as Infotech's Bid Express® service at www.bidx.com, an online bidding service, and obtain an online Digital ID. Bid Express can be reached at www.bidx.com, phone (888)-352-2439 and/or

customer.support@bidx.com. The bidder shall also download and install a copy of the AASHTOWare Project Bids Bid Component from the internet at the Bid Express website. The version of the software currently used by ADOT can then be located by selecting the ADOT tab and the “AASHTOWare Project Bids” link under Downloads.

In order to obtain a Digital ID, bidders shall name at least one authorized signatory, as approved by the Department to commit the firm to the terms and conditions specified in the Proposal and the contract documents.

The bidder shall download the electronic copy of the project EBSX file, listed as an AASHTOWare Project Bids Data File on the Bid Express website. The file includes a schedule of items folder containing the bid schedule, a miscellaneous data folder containing the proposal and attachments, contractor authorization folder containing bidders’s contact information, and a bid bond folder. The bidder shall review the proposal and complete the bidding schedule, as specified herein, and the attachments.

The bidder shall include with its bid an email address and recipient name as its contact information for the purpose of receiving the notice of award or other notices related to the bidding. The Department will send the notice of award, executed contract and other notices to the requested email address and recipient name.

It is the contractor’s responsibility to provide the updated contact information to the Department if there are any changes to the above requested email address or recipient name prior to the award of the contract.

The bidder shall specify a unit price for each pay item for which a quantity is given in the bidding schedule. The software will automatically produce the extended amount, as the product of the quantity given and the specified unit price.

The bidder shall also download all addenda files issued and update the project file accordingly. The bidder shall be responsible for the successful submission of its electronic bid prior to the time specified for submission of bids. The bidder agrees that the Department bears no liability resulting from the bidder's failure to successfully submit an electronic bid.

(2) Procedure for Missing Bids:

If a bidder believes that its electronically submitted bid should have been read at the bid opening but was not read, the bidder shall notify the Department at CSGroup@azdot.gov of the apparent irregularity and provide its bid receipt for the bid in question no later than three hours after the time specified for submission of bids.

Upon proper notification of a missing bid by a bidder, the Department will notify all bidders that a missing bid has been reported. The Department will begin an investigation to determine the status of the bid, and will review all electronic bids received from Bid Express service.

The Department will direct Infotech to review their records and determine whether the missing bid was submitted. Infotech will make a determination about receipt of the bidder's missing bid.

If requested by the Department, Infotech will attempt to retrieve a copy of the encrypted bid from the bidder's computer.

The Department will partner with Infotech and implement best practices to configure the Bid Express service to decrypt the bid.

If the Department determines that a bid cannot be recovered, the Department will notify all bidders of its determination.

If a missing bid is recovered, the Department will determine the validity of the bid, and may recommend award of the contract to the bidder submitting the missing bid if appropriate. The Department will notify all bidders.

102.09 Non-Collusion Certification:

By submission of its bid electronically, the bidder makes the certification stated in the following paragraph, binding as if it had been signed by the bidder.

The bidder certifies that, pursuant to Subsection 112(c) of Title 23, United States Code and Title 44, Chapter 10, Article 1 of the A.R.S, 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 free competitive bidding in connection with the submitted bid.

102.10 Irregular Proposals:

(C) Proposals may be considered irregular and may be rejected for any of the following reasons:

- (1) If there is a submission of any kind which may tend to make the proposal incomplete, indefinite or ambiguous as to its meaning.
- (2) If the bid is mathematically unbalanced.
- (3) If the bid is materially unbalanced.

(D) Proposals will be considered irregular and will be rejected for any of the following reasons:

- (1) If the bidder or surety fails to provide a proposal guaranty as specified in Subsection 102.11 of the specifications.

- (2) If the bidding schedule does not contain a unit price for each pay item listed.
- (3) If the bidder fails to meet the required goal for Disadvantaged Business Enterprises (DBE) established in the Special Provisions or show good faith effort as determined by the Department.

102.11 Proposal Guaranty:

The bidder shall provide an electronic proposal guaranty payable to the Arizona Department of Transportation for 10 percent of the amount of the bid.

The surety (bid) bond shall be executed by the bidder and a surety company or companies holding a certificate of authority to transact surety business in this State issued by the Director of the Department of Insurance. The agent for the surety shall be licensed to act as an insurance agent in Arizona.

Bidders shall provide an electronic proposal guaranty as described herein.

Two companies have established web-based surety processing procedures with Bid Express: Surety 2000 (<https://surety2000.com/>) and Sure Path Network (<http://web.insurevision.com/>). Bidders may contact these companies for additional information and requirements on electronic proposal guaranty.

102.12 Withdrawal of Proposals:

(A) General:

A bidder may withdraw its electronic submittal at a minimum 30 minutes prior to the time specified for bid opening in writing to the Contracts and Specifications Manager through the Contract and Specifications Group email at CSGroup@azdot.gov.

(B) Conditional Withdrawal:

When proposals for more than one contract are to be publicly read on any one date, a bidder may request in the event it is the apparent low bidder on a given contract or contracts, that one or more subsequent bids be withdrawn.

The bidder shall submit a written request for conditional withdrawal to the Contracts and Specifications Group Manager via email at CSGroup@azdot.gov a minimum of 30 minutes prior to the specified bid opening time.

102.13 Combination or Conditional Proposals:

At the Department's discretion, proposals may be issued for projects either separately or in combination. Bidders may submit bids for the combination or for individual units

within the combination, as allowed in the proposal. The Department reserves the right to award contracts based on separate or combination bids, whichever is most advantageous to the state. Only combination bids specifically authorized in the Department's proposal will be considered.

102.14 Public Opening of Proposals:

Proposals will be opened and read aloud at the time indicated in the advertisement for bid.

Bidders, their authorized agents and other interested parties may attend the bid opening while they are read aloud. After the completion of the bid opening, the as-read bid results will then be made available through the ADOT Contracts and Specifications Group website.

102.15 Licensing:

It is the responsibility of the bidder to determine whether it has the appropriate contracting licenses to perform the work. For all projects except Federal-aid funded projects, the bidder shall have the proper licenses at the time of bid opening. The successful bidder's failure to meet with the necessary license requirements at the time of bid opening will result in the rejection of the bid.

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 from the State Registrar of Contractors, in accordance with A.R.S. 32 1101 et seq. before award can be made, and no later than 60 days after the date bids are opened. The bidder's failure to get the necessary licenses within 60 days after the bid opening date will result in rejection of the bid.

Licensing information is available from:
Arizona Registrar of Contractors
1700 W. Washington St. Suite 105
Phoenix, AZ 85007-2812
Phone: (602) 542-1525
Email: Webmaster@azroc.gov
www.roc.az.gov

102.16 Boycott of Israel:

All bidders are required to certify in their bid proposal on the "Participation in Boycott of Israel Certification" form either:

- (A) The bidder does not participate in, and agrees not to participate in during the term of the contract, a boycott of Israel in accordance with ARS 35-393.01; or

- (B) The bidder does participate in a boycott of Israel as defined in ARS 35-393.01.

The Department will not recommend award of the contract unless the bidder makes the certification described in subparagraph (A) of this Subsection.

102.17 Forced Labor of Ethnic Uyghurs Ban:

All bidders are required to certify in their bid proposal on the “Forced Labor of Ethnic Uyghurs Ban Certification Form” either:

- (A) The bidder does not use the Forced labor of Ethnic Uyghurs as described in A.R.S. 35-394; or
- (B) The bidder does use the Forced labor of Ethnic Uyghurs as described in A.R.S. 35-394.

The Department will not recommend award of the contract if the bidder makes the certification described in subparagraph (B) of this Subsection, unless the bidder uses an exempt contractor.

For the purposes of this subsection, a contractor is defined as an exempt contractor if it is a sole proprietorship; has fewer than 10 employees; and/or is a non-profit organization.

(102NOBID, 09/19/12)

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS:

- 102.03 Suspension from Bidding:** of the Standard Specifications is revised to read:

The Department may suspend any person and any subsidiary or affiliate of any person from further bidding to the Department and from being a subcontractor or a 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, or 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 Department makes a finding of any of the above or finds that the contractor is not a Responsible Bidder or a Responsible Contractor.
- (C) If the Department determines that a contractor, subcontractor, or supplier has repeatedly or willfully failed to comply with federal or state immigration laws.

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 bidder constitutes the bidder's certification, under penalty of perjury under the laws of the United States, that the bidder, 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 bidder does not have a proposed debarment pending. In addition, signature of the bid proposal certifies that the bidder 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.

(102LOBY, 01/21/21)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS:

102.09 Non-Collusion Certification: of the Standard Specifications is modified to add:

(A) Lobbying:

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

- (1) No Federally 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 any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract grant, loan, or cooperative agreement.
- (2) If any funds other than Federally 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. Copies of Form-LLL, "Disclosure Form to Report Lobbying", are available at ADOT Contracts and Specifications Group, 205 South 17th Avenue, Room 121F, Phoenix, AZ 85007.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The bidder also agrees, by submitting the bid or proposal, that it shall require that the language of this certification be included in all subcontracts and lower tier subcontracts which exceed \$100,000 and

that all such subcontractors and lower tier subcontractors shall certify and disclose accordingly.

The Department will keep the prime contractors' certifications on file as part of their original bid proposals. Each prime contractor shall keep individual certifications from all subcontractors and lower tier subcontractors on file. Certifications shall be retained for three years following completion and acceptance of any given project.

Disclosure forms for the prime contractor shall be submitted to the Engineer at the pre-construction conference. Disclosure forms for subcontractors and lower tier subcontractors shall be submitted to the Engineer by the prime contractor along with the submittal of each subcontract or lower tier subcontract, as required under Subsection 108.01, when said subcontracts exceed \$100,000.00. During the performance of the contract the prime contractor and any affected subcontractors shall file revised disclosure forms at the end of each calendar year quarter in which events occur that materially affect the accuracy of any previously filed disclosure form. Disclosure forms will be submitted by the Engineer to the Federal Highway Administration for further processing.

(103AWARD, 09/17/20)

SECTION 103 - AWARD AND EXECUTION OF CONTRACT:

103.04 **Award of Contract:** of the Standard Specifications is modified to add:

The Department will make the award to the lowest responsible bidder who has the proper licenses.

When a contract is funded, either wholly or in part, by federal funds, an award of contract may be made contingent upon the successful bidder obtaining an appropriate license in accordance with the requirements of Subsection 102.16 of the specifications. The license must be obtained within 60 calendar days following opening of bid proposals. No adjustment in proposed bid prices or damages for delay will be allowed as a result of any delay caused by the lack of an appropriate license.

Failure to acquire the necessary licensing within the specified period of time shall result in either award to the next lowest responsible bidder, or re-advertisement of the contract, as may be in the best interests of the Department.

(104TPDDC, 08/21/25)

SECTION 104 SCOPE OF WORK:

104.04 Maintenance of Traffic: of the Standard Specifications is modified to add:

Prior to construction, alterations to contract phasing, detours, and Maintenance and Protection of Traffic plans shall be reviewed by the Engineer at the preconstruction conference or a pre-activity meeting based on the contractor's preliminary schedule and proposed contract phasing.

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SECTION 104 - SCOPE OF WORK:

104.04 Maintenance of Traffic: of the Standard Specifications is modified to add:

Prior to construction, alterations to contract phasing, detours, and Maintenance and Protection of Traffic plans shall be reviewed by the Engineer at the preconstruction conference or a pre-activity meeting based on the contractor's preliminary schedule and proposed contract phasing.

No construction activities will be allowed during nighttime periods. During daytime work periods, the contractor shall maintain a minimum of one 11-foot travel lane in each direction on San Xavier Road within the project limits. Any lane closures shall generally conform to Figure SA-3 of the *ADOT Traffic Control Design Guidelines*, except the Engineer may adjust the position of the signs due to site conditions.

The contractor shall conduct the construction activities to minimize any inconvenience to businesses, residences, and recreational areas in the vicinity of the project. The contractor shall maintain convenient access to each intersecting roadway within the project limits and to all properties alongside San Xavier Road at all times.

At all times, the contractor shall conduct the construction activities to safeguard pedestrians in the vicinity of the project. Any holes or trenches left open overnight shall be reasonably surrounded by Type II barricades and Type A flashing warning lights, connected by warning tape or rope, as directed by the Engineer. If required by the Engineer, the contractor shall provide plywood coverings or some other protection satisfactory to the Engineer over holes. There will be no direct measurement or payment for providing coverings over holes or the warning tape or rope, the costs being considered in the payment for the traffic control items.

The contractor shall not reduce the speed limit on San Xavier Road within the project limits unless the reduction is approved in writing by the Engineer. If the Engineer allows the contractor to reduce the speed limit on San Xavier Road, the speed reduction shall only be in place during working hours in the daytime. In addition, for any speed reduction allowed by the Engineer, the contractor shall provide a speed limit sign at the end of the construction which will indicate the speed limit at that location prior to the

speed reduction due to the construction operations. Each speed limit (R2-1) sign shall be 36 in. x 48 in. with black legend on a white background. The contractor shall utilize a 48 in. x 48 in. "SPEED REDUCED AHEAD" (W3-5aAZ) sign in conjunction with any speed reduction. Unless otherwise permitted by the Engineer, any speed limit sign used as part of the construction signing shall indicate a speed limit no more than 10 miles per hour below the speed limit in effect prior to the construction. Any sign indicating a reduction in the posted speed limit shall be positioned as close as practicable to the area where the reduction in speed is necessary, as determined by the Engineer. Signing for double fines in work zones, when allowed by the Engineer, shall generally conform to Figure SA-12 of the *ADOT Traffic Control Design Guidelines*. Such signing shall only be in place during work periods when workers are present in accordance with the guidelines for signing for double fines in work zones. If the contractor violates the guidelines for signing for double fines in work zones, the contractor shall forfeit the ability to include double fines signing as part of the traffic control.

Where no lane closure or shift is necessary, the contractor shall place 36 in. x 36 in. "SHOULDER WORK AHEAD" (W21-5c) signing as directed by the Engineer to alert the public to the construction activities.

At night, on weekends, on holidays, and as directed by the Engineer, the contractor shall maintain all traffic lanes on all roadways within the project limits.

The restricted holidays are:

- New Year's Day
- Civil Rights Day
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veterans Day
- Thanksgiving
- Christmas Day

(104MTBRN, 06/04/96)

SECTION 104 SCOPE OF WORK:

104.08 Prevention of Air and Noise Pollution: the first paragraph of the Standard Specifications is modified to add:

Burning of trash, debris, plant material, wood, or any other waste materials will not be allowed. The contractor shall dispose of such materials in accordance with the requirements of Subsection 107.11.

(104SWEPA, 02/10/20)

SECTION 104 SCOPE OF WORK:

104.09 Prevention of Stormwater Pollution: of the Standard Specifications is revised to read:

(A) General:

The contractor shall follow the requirements of Section 402 of the Clean Water Act (CWA), 33 USC 1251. The CWA regulates discharge of pollutants into the waters of the United States and provides quality standards for surface waters. Section 402 of the CWA provides stormwater pollution prevention regulations.

The contractor shall minimize ground disturbance to the natural surroundings. No ground disturbing activities shall occur until all applicable permits have been obtained. The applicable permit requirements must always be met.

The contractor shall provide adequate information to the contractor's personnel, including employees of any subcontractors, to ensure that all personnel understand requirements of the applicable permits that are relevant to their job functions.

(B) Clean Water Act, Section 402, National Pollution Discharge Elimination System (NPDES):

(1) General Requirements:

This project is located within tribal lands and erosion control and stormwater pollution prevention are regulated by the Environmental Protection Agency (EPA).

The contractor shall be responsible for preparing and processing all documents and implementing the requirements of the National Pollutant Discharge Elimination System (NPDES) "General Permit for Stormwater Discharges from Construction Activities," for pollution prevention due to stormwater runoff during construction, issued by the

Environmental Protection Agency (EPA). That document is hereinafter referred to as the Construction General Permit (CGP) and is available on EPA's website.

The work shall include providing, installing, and maintaining temporary and permanent pollution prevention control measures and removing and disposing of temporary pollution prevention control measures. Control Measures, as hereinafter referenced, shall be deemed to include pollution prevention control as described in the CGP. Control Measures may be temporary or permanent.

The contractor's schedule shall allow sufficient time for the following submittal, review, and approval times:

Table 104-1 Submittal, Review, and Approval Timeframes	
Contractor submittal of Erosion Control Coordinator (ECC) qualifications	By the pre-construction conference
Department review and approval of ECC qualifications	within seven calendar days of receipt
Department review and approval of subsequent submittals (if required)	within seven calendar days of receipt
Contractor submittal of SWPPP to Engineer	By the pre-construction conference
Department review of subsequent submittals (if required)	within seven calendar days of receipt
Engineer/contractor joint review and approval of SWPPP	within 10 calendar days after contractor submittal of SWPPP with ADOT approval of the ECC
Approved Notice of Intent (NOI) submittal and review times	as described in the CGP

No increase in contract time will be granted for the contractor's failure to provide acceptable submittals within the specified timeframes.

(2) Stormwater Pollution Prevention Plan (SWPPP):

The SWPPP shall include all information and permit requirements specified in the CGP and shall also be consistent with applicable federal, tribal, state, or local programs.

Unless otherwise approved by the Engineer and documented in the SWPPP, the contractor shall not expose a surface area of greater than 750,000 square feet to erosion through clearing and grubbing, or excavation and filling operations within the project limits until temporary or permanent Control Measures for that portion of the project have been installed and accepted by the Engineer.

The contractor shall indicate each 750,000 square-foot sub-area in the SWPPP, along with proposed Control Measures for each sub-area. The SWPPP shall also include the sequence of construction for each sub-area, and installation of the required temporary or permanent Control Measures.

The contractor shall give installation of permanent Control Measures priority over reliance on temporary measures. Permanent Control Measures and drainage structures shall be installed as soon as possible in the construction sequencing of the project, preferably concurrent with construction of the related sub-area or drainage device.

The project plans may include erosion/sediment control plans and details along with a Control Measure Index Sheet (CMIS) to assist the contractor in preparing the SWPPP. The contractor and the contractor's ECC, or other qualified designee, as described in Subsection 104.09(B)(3), shall review the contract documents, and prepare the SWPPP for review by the Engineer. The contractor shall use the Department's SWPPP Template to prepare the SWPPP. The template is available on the Department's Water Resources website.

The SWPPP shall specify the mechanism whereby revisions may be proposed by the contractor or the Engineer throughout the project and incorporated into the plan, including the review and approval procedure. The Engineer and contractor shall jointly approve and sign each revision to the SWPPP before implementation. Any revisions made by the contractor to amend the approved SWPPP will require two to seven calendar days for review.

The contractor shall prepare the SWPPP for the Engineer's review including all information specified herein. The contractor shall submit the SWPPP to the Engineer at the preconstruction conference.

Within 10 calendar days of the SWPPP submittal, the Engineer and contractor will jointly review the contractor's SWPPP. The contractor shall include any additional revisions directed by the Engineer. The SWPPP shall meet the terms and conditions of the CGP and be compatible with construction sequencing and maintenance of traffic plans.

When agreement has been reached, the Engineer and contractor's ECC will sign the SWPPP. The Engineer's signature will constitute approval of the SWPPP. Upon approval of the SWPPP, the contractor and the Engineer shall each file a Notice of Intent (NOI) as specified in Subsection 104.09(B)(6). The Engineer will provide a copy of the Department's NOI to the contractor to be included in the SWPPP.

The SWPPP shall be maintained in accordance with the CGP. A current copy shall be maintained at a location approved by the Engineer and amended as necessary from the time the contractor files its NOI until the NOT is submitted. The SWPPP shall be available for inspection by the entities identified in the CGP, and for use by the Engineer.

No condition of the CGP or the SWPPP shall release the contractor from any responsibilities or requirements under other environmental statutes or regulations.

In accordance with the CGP, the Engineer and the contractor shall confirm the frequency of inspections appropriate for the project. The contractor shall identify the frequency in the SWPPP. The contractor shall inform the Engineer when each inspection will be performed a minimum of 72 hours in advance so the Engineer can jointly perform the inspection if desired.

The contractor shall monitor rainfall on the site with a commercially manufactured rain gauge accurate to within 0.10 inches of rain. Rainfall records shall be maintained in the SWPPP.

The Environmental Permits Issues and Commitments (EPIC) sheet, included in the project plans, will identify whether Endangered Species and Historic Properties are present within the project limits. If required, documentation will be attached to the Special Provisions.

(3) Erosion Control Coordinator (ECC):

The contractor shall designate an erosion control coordinator (ECC), to be responsible for approval and implementation of the SWPPP, as well as all other applicable requirements of the CGP. The contractor's ECC shall have the qualifications described in Subsection 104.09(B)(4).

The contractor shall not assume that the person proposed as ECC will be accepted by the Department merely because the experience and education requirements listed herein have been met.

After approval, the contractor shall designate the ECC as a duly authorized representative of the contractor in accordance with, and as defined in, the CGP. Documentation of the delegation of a duly authorized representative shall be included as part of the SWPPP.

The ECC shall be capable of identifying existing and predictable effects of the contractor's operations, and shall have complete authority to direct the contractor's personnel and equipment to implement the requirements described herein, including prompt placement of corrective measures to minimize or eliminate pollution and damage to downstream watercourses. Corrective measures shall be completed in the timeframe required by the CGP and included in the SWPPP as required by the CGP.

The ECC shall at all times be aware of the contractor's work activities, schedule, and effect of the work on the environment. Should the ECC not be present at the project site on a full-time basis, the contractor shall establish procedures to ensure that its ECC is promptly notified of any damage or displacement of the required erosion control measures, whether from construction, vandalism, or other causes.

The contractor bears all risks and liabilities for the failure of its ECC to properly implement the requirements of the CGP.

Failure of the contractor to properly maintain the Control Measures required in the approved SWPPP may be cause for the Engineer to reject the ECC and issue a stop work order, as specified in Subsection 104.09(B)(7).

(4) ECC Certification Requirements:

The ECC shall have successfully completed the mandatory two-day (16 hour) "Erosion Control Coordinator" training class (hereinafter referred to as the training class) provided by the Associated General Contractors (Arizona Chapter), phone (602) 252-3926. No other training can be substituted.

The training class certification is valid for three years. Within 60 days of the end of the three year period, in order to maintain the training class certification, the ECC shall successfully complete either a six-hour "Erosion Control Coordinator Refresher" class (hereinafter referred to as the refresher class), also provided by the Associated General Contractors (Arizona Chapter), or the two-day training class specified above. The refresher class will be required every three years thereafter, prior to the expiration date listed on the previous certificate. Should more than three years (and 60 day grace period) elapse from completion of either the training class or refresher class, the contractor's ECC will be required to successfully complete the two-day training class in order to again be eligible for consideration.

In addition, the contractor's ECC shall have documented experience equal to a minimum of one year from either of the following two categories:

- (a) Experience in the implementation of SWPPPs. The ECC's experience shall demonstrate full-time responsibility for directly supervising construction personnel in the installation, inspection, and maintenance of pollution prevention measures.
- (b) Experience in stabilization of disturbed areas in environments similar to those on the project.

The contractor's documentation shall provide details indicating the types of relevant experience, and shall provide the number of months of each type of experience to be considered for approval.

The contractor's documentation shall also indicate that the proposed ECC has completed the training class or refresher class. To be considered for approval, the contractor's documentation shall include a copy of the proposed ECC's certification.

(5) Acceptance of ECC and SWPPP:

The contractor shall submit documentation indicating the qualifications of the ECC to the Engineer for approval no later than the pre-construction conference. The Engineer will review the proposed candidate's information within seven calendar days. The contractor may begin development of the SWPPP prior to approval of the ECC. However no clearing, grubbing, earthwork, or other work elements that may be subject to the requirements of the CGP shall be started until the ECC has been approved, the SWPPP finalized and implemented, the NOIs completed and filed, and the CGP authorization received by the contractor and the Engineer.

(6) Notice of Intent:

After the project SWPPP has been approved by the Engineer, the Engineer and the contractor will each complete separate Notice of Intent (NOI) forms for the project. The contractor shall submit the NOI to the EPA as required by the EPA's CGP.

Unless notified otherwise by the EPA, the contractor will be authorized to begin implementation of the approved SWPPP 14 calendar days after acknowledgement of receipt of both NOIs is posted on EPA's NPDES website. Acknowledgement of receipt of both NOIs may be by email from the EPA or from the listing on the EPA's NPDES website showing the NOIs with an active status. Should additional information be required by EPA, the contractor is not authorized to begin SWPPP-related work until notice of eligibility is received from the EPA.

No adjustments to the contract time or costs will be made for the 14 calendar-day review period specified above. If the EPA approval process requires more than 14 calendar days, the contractor may seek, and the Engineer may grant, a non-compensable extension of time in accordance with the terms of Subsection 108.08.

(7) Non-Compliance:

The Engineer may reject the contractor's ECC if, in the opinion of the Engineer, the conditions of the CGP or the SWPPP are not being fulfilled. Rejection of the contractor's ECC shall be for failure to complete any of the following:

- (a) Should the Engineer determine that the SWPPP is not being properly implemented; the contractor will be notified in writing of such deficiencies. The contractor's ECC shall fully implement, to the satisfaction of the Engineer, the requirements of the approved SWPPP within three working days.
- (b) Should any corrective measures required in the CGP not be completed within the time periods specified therein, the Engineer will notify the contractor in writing. The contractor's ECC shall complete all required corrective measures within two calendar

days of such notification, except that direct inflows of sediment into a watercourse shall be corrected within 24 hours.

- (c) (Should the Engineer determine that routine maintenance of the project's Control Measures are not being adequately performed, the contractor will be notified in writing. Within three working days, the contractor's ECC shall demonstrate, to the satisfaction of the Engineer that such steps have been taken to correct the problem.

In the event of the ECC's failure to comply with the CGP or any of the above requirements, the Engineer will direct the contractor to stop all affected work and propose a new ECC as soon as possible. However, all Control Measures specified in the SWPPP shall be maintained at all times. No additional work on construction items affected by the SWPPP will be allowed until a new ECC has been approved by the Engineer. The contractor will not be allowed compensation or an extension of contract time for any delays to the work because of the failure of the contractor's ECC to properly fulfill the requirements of the SWPPP.

(8) Notice of Termination:

Upon written approval of the Engineer, the contractor shall complete and submit a Notice of Termination (NOT) to the Engineer for approval. After approval by the Engineer, the contractor shall submit the NOT to EPA.

The NOT shall be submitted as described in the CGP.

A copy of the SWPPP and the NOT shall be provided to the Engineer within seven days of the contractor receiving acknowledgement from the EPA. The copies may be either electronic or hard copies.

(C) Blank

(D) Measurement and Payment:

Measurement and payment for work specified in the SWPPP will be made in accordance with the requirements of Section 810. Control Measures specified in the contract which are to be accomplished under any of the other various contract items will be paid for as specified under those items.

If a force account pay item for Control Measures is included in the bidding schedule, the contractor may be reimbursed for such additional Control Measures proposed by the contractor but not included with the plans or specifications. Such additional Control Measures must be approved in writing by the Engineer before use. Items for Control Measures approved by the Engineer will be paid in accordance with Subsection

109.04(D). No measurement or payment will be made for such additional items not approved by the Engineer.

No measurement or payment will be made to the contractor for time spent in preparing, reviewing, and revising the SWPPP, or providing other required documentation, the cost being considered as included in the price of contract items. No measurement or payment will be made for inspections, training of personnel, the contractor's erosion control coordinator, the contractor's pollution prevention practices and requirements, or maintenance of the Control Measures during a suspension of work, the costs being considered as included in contract items.

Unless otherwise specified, no measurement or payment will be made for maintenance of temporary and permanent Control Measures, the cost being considered as included in contract items.

104.10 Contractor's Responsibility for Work: of the Standard Specifications is revised to read:

The contractor shall implement the requirements of the CGP for pollution prevention due to stormwater runoff during construction, as specified above in Subsection 104.09, Stormwater Pollution.

Until final written acceptance of the project by the Engineer, the contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part thereof by the action of the elements, or from any other cause, whether arising from the execution or from the nonexecution of the work. The contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance. No reimbursement shall be made for work necessary due to the contractor's failure to comply with the requirements of the SWPPP.

Except as specifically provided under Subsection 104.04, in case of suspension of work from any cause whatever, the contractor shall be responsible for the project and shall take such precautions as may be necessary to prevent damage to the project and provide for normal drainage. The contractor shall maintain Control Measures in working order during any stoppage of work. Based on the nature of the work stoppage, the contractor and the Engineer shall determine the maintenance requirements. The contractor shall comply with the CGP including inspection of the project.

The contractor shall also erect any necessary temporary structures, signs or other facilities. During such period of suspension of work, the contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seedings and soddings, furnished under its contract and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

(104STORM, 11/01/95)

SECTION 104 - SCOPE OF WORK:

104.11 Damage by Storm, Flood or Earthquake: Item (D), Idled Equipment and Remobilization, of the Standard Specifications is hereby deleted.

104.11 Damage by Storm, Flood or Earthquake: Items (E) and (F) of the Standard Specifications are revised to read:

(D) Payment for Repair Work:

The State will pay the cost of the repair work as determined in Subsection 109.04.

(E) Termination of Contract:

If the Department 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 Subsection 108.11, Termination of Contract for Convenience of the Department.

(104ENVIR, 06/17/21)

SECTION 104 SCOPE OF WORK:

104.12 Environmental Analysis: the fifth and sixth paragraphs of the Standard Specifications are revised to read:

If the contractor elects to do an environmental analysis and use any site, source, or access for the reasons listed above, they choose to do so at their own risk. It is the contractor's responsibility to exercise due diligence when selecting these sites and areas. The contractor shall bear all costs associated with the use of proposed sites, sources, and accesses.

The contractor shall promptly advise the Engineer that it is preparing the environmental analysis and shall submit to the Engineer for review and consultation. The Department will review the submittal and send it to the appropriate agencies and/or jurisdictions for consultation or return it to the contractor for revision. The contractor shall allow a minimum of 60 calendar days after submittal, or subsequent resubmittals, to the Department for the Department to review the environmental analysis and to consult with the appropriate jurisdictions and/or agencies. At the end of the review period, the Engineer will notify the contractor whether or not the environmental analysis is acceptable.

If the approval of the environmental analysis causes a delay to a controlling activity of the project due to the Department's actions in the aforementioned review process, the contractor may seek, and the Engineer may grant, an extension of time in accordance with the terms of Subsection 108.08 of the specifications. The time extension shall not exceed 30 working days for a working-day contract, or 45 calendar days for a calendar-day project. The time extension will not be considered unless the contractor can show evidence of the delay resulting due to the Department's actions in the review process. A time extension request will not be considered or granted for any other reason. No time extension will be granted for a fixed completion date contract.

104.12 Environmental Analysis: the items (G) and (O) of the seventh paragraph of the Standard Specifications is revised to read:

- (G) The archaeological survey of the proposed source prepared by a person who meets the Secretary of the Interior's Professional Qualification Standards (48 FR 44716) and possesses a current permit for archaeological survey issued by the Arizona State Museum (ASM). The survey shall be prepared in a State Historic Preservation Office (SHPO) standardized format. The survey shall identify all historic properties within the area of potential effect (APE), as defined by the National Historic Preservation Act (36 CFR 800.4). This includes the materials source, processing area, and the haul road. Additionally, the survey report shall identify the effects of the proposed source on any historic properties within the APE, and recommend measures to avoid, minimize, or mitigate those effects. The survey report shall be prepared by the contractor in accordance with SHPO and ASM formatting style for the Historic Preservation Specialist's initial review. After the initial review, the Department will consult with the landowner, SHPO, and Tribes for a minimum of 35 days for the final approval of the survey report.
- (O) A description of the impact on federally or state protected or other agency-specific special status wildlife and plants and their habitat, as defined in ADOT's consultant biological procedures on the Department's website. Compliance with the Arizona Native Plant Law shall be coordinated through the Arizona Commission of Agriculture and Horticulture.

104.12 Environmental Analysis: the eighth paragraph of the Standard Specifications is revised to read:

Guidance and forms for preparing the environmental analysis are available on the Department's website through the Environmental Planning Group, or by calling Environmental Planning Group at 602-712-7767.

(104VEPC, 03/20/25)

SECTION 104 SCOPE OF WORK:

104.13 Value Engineering Proposals by the Contractor: the third paragraph of the Standard Specifications is revised to read:

Any cost savings generated to the contract as a result of VEP offered by the contractor and approved by the Department will be shared between the contractor and the Department, with the contractor receiving 60 percent and the Department receiving 40 percent, as specified in Subsection 104.13(D) of the specifications.

104.13(C) Conditions: of the Standard Specifications is modified to add:

- (13) The contractor may submit a previously approved VEP from another project.

104.13(D) Acceptance, Rejection and Payment: the seventh paragraph of the Standard Specifications is revised to read:

- (6) The executed supplemental agreement shall provide that the contractor be paid 60 percent of the net savings amount as reflected by the difference between the cost of the revised work and the cost of the related construction required by the original contract computed at contract bid prices. The net savings will take into account the contractor's cost of developing the VEP and implementing the change, and reducing this amount by the Department's cost for investigating and evaluating the VEP, including any ascertainable collateral costs to the Department. Such collateral costs may include increased costs for maintenance, operation, related work items, additional work items, or elements of related or additional work items.

(104ENVST, 09/19/24)

SECTION 104 SCOPE OF WORK:

104.16 Environmental Standard Work: of the Standard Specifications is hereby modified as follows:

BIO-2B: MBTA – General Requirements:

If construction occurs during the breeding season (breeding season start date March 1st and breeding season end date August 31st), the contractor shall employ a qualified biologist to conduct a migratory bird nest survey of all affected vegetation within the work area no sooner than 10 days prior to clearing and grubbing. Vegetation removal

may proceed if the survey determines that no active bird nests are present. If active nests are found the contractor shall notify the Engineer and avoid and protect the nests. The Engineer will further direct how to avoid and protect nests. If active nests are found in the project work area, the contractor shall not begin work until it is so directed by the Engineer. In the event of a suspension of work the contractor shall refer to the provisions of Subsection 104.02 of the specifications. During the non-breeding season (non-breeding season start date September 1st through non-breeding season end date February 28th), vegetation removal is not subject to this restriction.

If active bird nests are found during the nest survey and avoidance is not possible, as determined by the Engineer, the contractor shall employ a wildlife rehabilitator who, in coordination with the Department Environmental Planning Biologist and relevant programmatic agreements, will apply for a project specific US Fish and Wildlife Service Migratory Bird Treaty Act Special Purpose – Relocation Permit. The wildlife rehabilitator shall be permitted by the US Fish and Wildlife Service and licensed by the Arizona Game and Fish Department. Relocation of any eggs or nestlings from active nests shall be performed by the wildlife rehabilitator.

No later than 10 working days after the completion of each relocation effort, the contractor shall submit a written report containing the following information to the Engineer:

- (1) Project name, location and ADOT project number;
- (2) Point of contact;
- (3) Date(s) of relocations;
- (4) Location of the areas birds where moved from and where they were moved to;
- (5) An explanation of why the birds were relocated;
- (6) The number of birds relocated; and
- (7) Name of rehabilitator, AZGFD rehabilitator license and USFWS permit information.

BIO-3: (MBTA – Burrowing Owls)

BIO-3A: MBTA – Burrowing Owl Awareness Flyer:

Prior to construction, all field personnel who will be on-site, including subsequent new hires and subcontractors shall review the “Western Burrowing Owl Awareness” flyer available on the Department’s Environmental Planning website and these contract documents.

If any burrowing owls or active burrows are discovered, they shall be avoided and protected and the contractor shall immediately notify the Engineer. The Engineer will further direct how to protect the burrows to avoid impacts to owls. The contractor shall not begin or resume work until it is so directed by the Engineer. In the event of a suspension of work, the contractor shall refer to the provisions of Subsection 104.02 of the specifications.

BIO-3B: MBTA – Burrowing Owl Preconstruction Survey:

The contractor shall employ a qualified biologist to complete a preconstruction survey for burrowing owls no sooner than 96 hours prior to construction in all suitable habitats that will be disturbed. The biologist shall possess a burrowing owl survey protocol training certificate issued by the Arizona Game and Fish Department.

If any burrowing owls or active burrows are discovered, they shall be avoided and protected. The contractor shall notify the Engineer immediately. The Engineer will further direct how to avoid impacts to the owls and protect the burrows. The contractor shall not begin or resume work until it is so directed by the Engineer. In the event of a suspension of work, the contractor shall refer to the provisions of Subsection 104.02 of the specifications.

BIO-3C: MBTA – Burrowing Owl Relocation:

If an active burrow is found during survey or construction and avoidance is not possible, as determined by the Engineer, the contractor shall employ a wildlife rehabilitator who in coordination with the Department Environmental Planning Biologist and relevant programmatic agreements will apply for a project specific US Fish and Wildlife Service Migratory Bird Treaty Act Special Purpose - Relocation Permit. The wildlife rehabilitator shall be permitted by the US Fish and Wildlife Service and licensed by the Arizona Game and Fish Department. Relocation of owls or eggs from active burrows shall be performed by the wildlife rehabilitator.

No later than 10 working days after the completion of each relocation effort, the contractor shall submit a written report containing the following information to the Engineer:

- (1) Project name, location and ADOT project number;
- (2) Point of contact;
- (3) Date(s) of relocations;
- (4) Location of the areas birds where moved from and where they were moved to;

- (5) An explanation of why the birds were relocated;
- (6) The number, age and sex of birds relocated; and
- (7) Name of rehabilitator, AZGFD rehabilitator license and USFWS permit information.

(F) Specific Vegetation Protection Program: is hereby added to the Standard Specifications:

The contractor shall control noxious and invasive plant species throughout the duration of the project in accordance with the requirements of these special provisions. All disturbed soils that are not landscaped or otherwise permanently stabilized by construction shall be seeded in accordance with the requirements of Item 8050003 of these special provisions.

The contractor shall not disturb unpaved areas without the approval of the Engineer or as stated in the Environmental, Permits, Issues, and Commitments (EPIC) plan sheet 1F of the project plans. If any unpaved areas are disturbed as a result of the contractor's operation and without the approval of the Engineer, the contractor shall seed the areas with species native to the project vicinity. All seeded areas shall be covered by straw mulch with tacking agent. The contractor shall provide the seed mix to the Engineer for approval prior to placing any seeding. No measurement or payment will be made for seeding, the cost being considered as included in the price of contract items.

(105TPDDC, 08/21/25)

SECTION 105 CONTROL OF WORK:

105.18 Opening Sections of Project to Traffic: of the Standard Specifications is modified to add:

Damage to the project resulting from a third-party shall be reported to the Engineer. Damages to permanent project features, determined by the Engineer as eligible for payment in accordance with the requirements of Subsection 104.04 of the specifications, will be paid for in accordance with Subsection 109.04 of the specifications.

(106DMAT, 12/18/25)

SECTION 106 CONTROL OF MATERIALS:

106.15 Blank: of the Standard Specifications is revised to read:

106.15 Domestic Materials and Products:

Steel and iron materials and products used on this project shall comply with the current "Buy America" requirements of 23 CFR 635.410.

All manufacturing processes to produce 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 0.1 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.

The contractor shall furnish the Engineer with Certificates of Compliance, conforming to the requirements of Subsection 106.05, which state that steel or iron products incorporated in the project meet the requirements specified. Certificates of Compliance 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.

(106CMATLS, 12/18/25)

SECTION 106 CONTROL OF MATERIALS: of the Standard Specifications is modified to add:

106.17 Construction Materials:

A construction material shall comply with the requirements of Build America, Buy America (BABA) Act specified in Title IX, Subtitle A, Part 1, Sections 70901 and 70911-70917 (Pub. L. No. 117-58 §§ 70901; §§ 70911-70917) 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.

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.

If the total cost of construction materials incorporated in the project is no more than 5% of the original contract amount or \$1,000,000, whichever is lesser, the requirements specified herein will not apply for such construction materials.

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

(106MAPR, 12/18/25)

SECTION 106 CONTROL OF MATERIALS: of the Standard Specifications is modified to add:

106.18 Manufactured Products:

Manufactured products used on all projects shall comply with the current “Buy America” requirements of 23 CFR 635.410.

A “manufactured product” is defined as an article, material, or supply that has been processed into a specific form and shape, or combined with other articles, materials, or supplies to create a product with different properties than the individual article, material, or supply. Items manufactured through a combination of two or more materials, or at least one listed construction material and a material not listed, shall be classified as manufactured products.

An item classified as iron or steel product in accordance with the requirements specified in Subsection 106.15 of the specifications or excluded materials such as cement and cementitious materials; bituminous materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives is not considered a manufactured product. However, manufactured product may include components that are iron or steel products or excluded materials.

Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not considered manufactured products.

Precast concrete products, components of precast concrete products that consist wholly or predominantly of iron or steel or a combination of both, will be considered iron and steel product and shall meet the requirements specified in Subsection 106.15 of the specifications.

The intelligent transportation systems and other electronic hardware systems that are installed in the highway right of way or other real property, the cabinets or other enclosures of such systems that consist wholly or predominantly of iron or steel or a combination of both will be considered iron and steel product and shall meet the requirements specified in Subsection 106.15 of the specifications.

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 manufactured products incorporated in the project meet the requirements specified herein. Certificates of Compliance shall also certify that all manufactured products used in the project are manufactured in the United States.

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

(107UINSLMTS, 02/20/25)

SECTION 107 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.14 Insurance: the sixth paragraph of the Standard Specifications is revised to read:

Without limiting any liabilities or any other obligations of the contractor, the contractor shall provide and maintain, if commercially available, the minimum insurance coverage listed below until all obligations under this contract are satisfied:

- (A) General Liability insurance with a minimum combined single limit of \$1,000,000 each occurrence applicable to all premises and operations, and a minimum general aggregate limit of \$2,000,000. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products and completed operations. Further, the policy shall include coverage for the hazards commonly referred to as XCU (explosion, collapse and underground). The products and completed operations coverage shall extend for one year past acceptance, cancellation or termination of the work. The policy shall contain a severability of interests provision.
- (B) Comprehensive Automobile Liability insurance with a combined single limit for bodily injury and property of not less than \$1,000,000 each occurrence with respect to contractor's owned, hired, or non-owned vehicles, assigned to or used in performance of the work.
- (C) Workers' Compensation insurance to cover obligations imposed by Federal and State statutes having jurisdiction of its employees engaged in the performance of the work, and Employers' Liability insurance with a minimum limit of \$1,000,000. Evidence of qualified self-insured status will suffice for this subsection.
- (D)

(107UTIL, 04/17/25)

SECTION 107 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.15 Contractor's Responsibility for Utility Property and Services: of the Standard Specifications is modified to add:

Copies of existing ADOT permits, subject to availability, may be obtained from the ADOT Area Permit Supervisor as listed below:

SOUTHCENTRAL DISTRICT

(520) 388-4232 1221 S. 2nd Avenue
(520) 388-4200 Tucson, AZ 85713

Email address:
southcentralpermit@azdot.gov

THE FOLLOWING UTILITY COMPANIES HAVE FACILITIES IN THE PROJECT AREA BUT ARE NOT ANTICIPATED TO BE IN CONFLICT:

Tohono O'odham Utility Authority Ross Schroeder (520) 993-6068
(TOUA) Water/Wastewater
Highway 86, Mile Marker 112
Sells, Arizona 85634

TOUA water valves (2) will require adjustments to finish grade as shown on the project plans and to be completed by the contractor.

Tohono O'odham Utility Authority Joe Mease (520) 383-5822
(TOUA)
Electric (Overhead Electric)
Highway 86, Mile Marker 112
Sells, Arizona 85634

Lumen Andrew Sotero (520) 370-4784
333 E. Wetmore Road, 3rd Floor Joe Parker (Field) (520) 205-1049
Tucson, Arizona 85705
Terra Technologies LLC (Consultant for Lumen) Mike Thompson (928) 221-4133

POWER LINES:

The project has overhead power lines and other utilities at various locations throughout the project limits; however, they are not anticipated to be in conflict. All work at or in close proximity to said lines shall be performed in accordance with all Federal, State, and local laws and regulations, including but not limited to:

- (1) Arizona law regarding "Underground Facilities" (A.R.S. 40-360.21, .22, .24, .26 and .28).
- (2) Arizona law regarding "High Voltage Power Lines and Safety Restrictions" (A.R.S. 40-360.41-.45).
- (3) The Occupational Safety and Health Administration.
- (4) The National Electric Safety Code.

It shall be the contractor's responsibility to determine the exact location of the utilities, in accordance with AZ 811 law, prior to any construction operations and to notify the above mentioned utility companies at least two working days prior to commencing any work on the project, unless otherwise noted.

The contractor shall coordinate with the Engineer to request that all the above utility companies be invited to the Pre-Construction meeting.

107.15(F) Sewage Discharge Damage Assessments: of the Standard Specifications is revised to read:

The Department will assess sanctions in accordance with the Table 107.15-1 below for each 24-hour period, or portion thereof, for each unplanned breakage that occurs in an active sanitary sewer line as a result of the contractor's operation. The rate of these sanctions is based on the type and quantity of effluent discharged as determined by the Engineer.

These sanctions do not relieve the contractor from any of its responsibilities under the contract, including any liquidated damages that may be assessed under Subsection 108.09 of the specifications for late completion of the project.

The sanctions specified in this subsection will be independent of any penalties imposed by others.

The contractor acknowledges that Regulatory agencies may assess or impose civil or criminal penalties on the contractor resulting from sewer discharges.

The Department will not be responsible for any civil or criminal penalties, fines, damages, or other charges imposed on the contractor by any regulatory agency or court for sewage discharges that are a result, directly or indirectly, of the contractor's work performed under this contract.

TABLE 107.15-1 SANCTIONS (EACH 24-HOUR PERIOD, OR PORTION THEREOF)		
Volume of Discharge	Raw Sewage or Industrial Wastewater	Treated Effluent
Less than 10,000 gallons	\$5,000	\$1,000
10,000 to 99,999 gallons	\$10,000	\$2,000
100,000 to 1 million gallons	\$25,000	\$3,000
Greater than 1 million gallons	\$40,000	\$5,000

These sanctions will be assessed for each 24-hour period, or portion thereof, until the contractor has completed all of the following tasks:

Stopped the discharge;
Repaired the damaged pipe;
Restored normal service; and
Fully cleaned and disinfected the site to the satisfaction of the Engineer.

Upon completion of tasks (1), (2), and (3) above, and prior to completion of Task (4), the sanctions for the current 24-hour period will be at the rate shown in Table 107.15-1. However, for each subsequent 24-hour period, the assessment will be 1/2 of the rate shown in Table 107.15-1.

The sanctions will continue at the reduced rate until the site has been fully cleaned and disinfected to the satisfaction of the Engineer.

As an example, the amounts assessed each 24-hour period for an unplanned discharge of 20,000 gallons of raw sewage, in which the contractor completes tasks (1), (2), and (3) within the second 24-hour period but does not complete full cleanup until the third 24-hour period, will be as follows:

First 24-hour period: \$10,000
Second 24-hour period: \$10,000
Third 24-hour period: \$5,000

For this example, the total sanction will be \$25,000 (\$10,000 + \$10,000 + \$5,000).

(108SUBLT, 10/20/22)

SECTION 108 PROSECUTION AND PROGRESS:

108.01 Subletting of Contract: the thirteenth paragraph of the Standard Specifications is revised to read:

If a subcontractor, of any tier, begins work on the contract prior to the contractor submitting the required documentation and receiving consent from the Engineer, the Department will retain \$1,000 from monies due or becoming due the contractor. The money retained will be for each subcontractor, of any tier, that starts work without the consent of the Engineer. These sanctions will be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

(108PRCN, 08/19/21)

SECTION 108 PROSECUTION AND PROGRESS:

108.03 Preconstruction Conference: the second paragraph of the Standard Specifications is revised to read:

At the preconstruction conference the contractor shall submit a progress schedule showing the order in which the contractor proposes to carry out the work, the dates on which the contractor and its subcontractors will start the work, including procurement of materials, equipment, etc.; the ordering of articles of special manufacture; the furnishing of drawings, plans and other data required under Subsection 105.03 of the specifications for the review and approval of the Engineer; the inspection of structural steel fabrication; and the contemplated dates for the completion. The schedule shall be in a critical path method format. No schedule activity shall be shorter than one day or longer than 20 days. The schedule must show interrelationships among the activities, and the controlling items of work throughout the project shall be identified. If requested by the Engineer, the contractor shall furnish information needed to justify activity time durations. Such information shall include estimated manpower, equipment, unit quantities, and production rates. The schedule shall illustrate the completion of the work not later than the contract completion date.

108.03 Preconstruction Conference: the second paragraph of the Standard Specifications is revised to read:

At the preconstruction conference the contractor shall submit a progress schedule showing the order in which the contractor proposes to carry out the work, the dates on which the contractor and its subcontractors will start the work, including procurement of materials, equipment, etc.; the ordering of articles of special manufacture; the furnishing of drawings, plans and other data required under Subsection 105.03 of the specifications for the review and approval of the Engineer; the inspection of structural

steel fabrication; and the contemplated dates for the completion.

108.04 Prosecution and Progress: the third paragraph of the Standard Specifications is revised to read:

At a mutually convenient location and time, the contractor shall meet weekly with the Engineer to discuss construction activities; however, a meeting may be waived if mutually agreed to, due to weather conditions, work progress, or for other reasons. At the meetings, the contractor shall provide the Engineer with a detailed, written schedule of construction activities and phases of work for the current week, forthcoming three week period as well as the construction activities which were performed during the previous week. This schedule shall detail the anticipated start dates and anticipated completion dates of work activities. The weekly schedule should reflect, at a minimum, all activities from the most recently updated project schedule. For work which was completed during the previous week, this schedule shall detail the actual start and completion dates of work activities as well as indicate the status of major ongoing activities. Upon the second occurrence of the contractor failing to provide an accurate schedule as describe herein and after written notification by the Engineer of the first occurrence, the Department will deduct \$500 from the contractor's progress payment per each occurrence thereafter. Minutes of the weekly meetings will be kept by the Engineer and a copy given to the contractor for review and acceptance.

(108TIME, 10/15/20)

SECTION 108 PROSECUTION AND PROGRESS:

108.08 Determination and Extension of Contract Time: the first paragraph of the Standard Specifications is revised to read:

The time allowed for the completion of the work included in the construction phase of the contract will be 120 calendar days.

The time allowed for the completion of the work included in the landscape establishment phase of the contract will be 720 calendar days.

The total of the time allowed for the construction phase and the landscape establishment phase will be known as the "Contract Time."

(108RSLD,06/19/2025)

SECTION 108 PROSECUTION AND PROGRESS:

108.09 **Failure to Complete the Work on Time:** the Schedule of Liquidated Damages table of the Standard Specifications is revised to read:

SCHEDULE OF LIQUIDATED DAMAGES			
Original Contract Amount		Liquidated Damages Per Day	
From More Than:	To and Including:	Calendar Day or Fixed Date:	Working Day:
\$ 0	\$ 500,000	\$ 300	\$ 1,000
\$ 500,000	\$ 1,000,000	\$ 850	\$ 1,700
\$ 1,000,000	\$ 2,000,000	\$ 1,250	\$ 2,650
\$ 2,000,000	\$ 5,000,000	\$ 2,100	\$ 3,800
\$ 5,000,000	\$ 10,000,000	\$ 3,300	\$ 6,850
\$ 10,000,000	\$ 30,000,000	\$ 7,300	\$ 10,550
\$ 30,000,000	\$ 60,000,000	\$ 9,350	\$ 17,750
\$ 60,000,000	\$ 90,000,000	\$ 19,900	\$ 27,850
\$ 90,000,000	-----	\$ 27,450	\$ 38,400

(108SCHLVL1, 08/19/21)

SECTION 108 PROSECUTION AND PROGRESS: of the Standard Specifications is modified to add:

108.12 Schedules:

(A) Definitions:

Activity:

A discrete, identifiable task or event that contributes to completing the project and can be used to schedule and monitor the work.

Activity ID:

A unique alphanumeric identification code permanently assigned to an activity.

Baseline Schedule:

A Critical Path Method (CPM) schedule illustrating the contractor's committed plan to complete the work within the contract time and used to compare the progress of the work.

Constraint:

A limitation placed on a scheduled activity that affects the start or end date of an activity.

Critical Path:

The longest continuous chain of activities which establishes the minimum overall project duration.

Critical Path Method (CPM):

A network-based planning technique that uses activity durations and relationships to calculate a schedule for the project.

Data Date:

The date from which a schedule is calculated, where all activities occurring earlier than the data date are complete and all activities occurring on or after the data date are planned.

Duration:

The estimated time required to complete an activity as recorded on the Project Schedule.

Float Suppression/Sequestering:

The process of utilizing zero free float techniques that allows an activity to start as late as possible by using all available free float of that activity, by the utilization of overly generous activity durations, or by using overly restrictive calendar non-working periods.

Free Float:

The amount of time an activity may be delayed without delaying the early start date of its successors.

Longest Path:

The longest continuous path of activities through a project, which controls project early completion.

Look-Ahead Schedule:

A computer-generated schedule that shows the previous week's work and the work planned for the current and next three weeks.

Milestone:

An activity, with no duration, that is typically used to represent the beginning, end, interim stages and significant events of the project, or contractually required dates.

Monthly Progress Schedule:

A monthly update to the approved baseline schedule.

Narrative:

A written report explaining the Project Schedule in detail.

Predecessor:

An activity that affects the start or finish date of another activity with a logically tied relationship.

Preliminary Schedule:

A CPM schedule that shows the Baseline Schedule for the first 60 calendar days of contract time and, the work breakdown structure and milestones for the entire contract.

Project Schedule:

A logic-based critical path for all work leading up to and including substantial completion or final acceptance that is used for tracking the performance of the work. The term "Project Schedule" will refer to one or more of the following:

- (a) Baseline Schedule,
- (b) Monthly Schedule, or
- (c) Recovery Schedule.

Record Schedule:

A CPM schedule that shows the actual start and finish date of each activity, durations, and all changes.

Recovery Schedule:

A CPM schedule that shows the activity changes to recover the time lost due to incompletion of the work within the contract time as specified in the Monthly Progress Schedule.

Scheduler:

An individual, who creates, maintains and revises the Project Schedule using applicable software.

Successor:

An activity whose start or finish date is affected by the logically tied relationship with another activity.

Time Impact Analysis (TIA):

A forward-looking, prospective schedule analysis developed to demonstrate the impact of a change to the current schedule on its longest path.

Total Float (Float):

The cumulative duration of time an activity may be delayed without delaying the contract time or a contractual milestone.

Work Breakdown Structure (WBS):

A framework for organizing and ordering the work activities into hierarchical groups.

(B) General:

The contractor shall prepare, furnish, and use the Project Schedule to plan, monitor, and report the progress of the work. The schedule shall demonstrate a detailed plan to complete the work in accordance with the contract time and be used in communication to coordinate activities among all affected parties.

The contractor shall provide a Scheduler to create and maintain all schedules, updates, Narratives, reports, and TIA related to this project. The Scheduler shall be proficient in CPM schedule development, analysis of resources applicable to the required detail of

the Project Schedule, and shall be able to perform the required tasks using the specified software.

The Scheduler shall be present at all schedule meetings, in person or via teleconference, and made available for discussion or meetings when requested by the Engineer. The contractor project management personnel, subcontractors, and suppliers shall actively communicate with the Scheduler to develop and maintain accurate updates of progress and schedule revisions throughout the duration of the contract.

The Department's review and comment on a schedule for compliance with this specification does not do the following:

- (1) Imply or constitute approval of particular construction methods or relieve the contractor of its responsibility to provide sufficient materials, equipment, and labor to complete the project in accordance with the contract;
- (2) Attest to the validity of assumptions, activities, relationships, sequences, resource allocations, or other aspects of the schedule;
- (3) Imply the contractor is entitled to a Supplemental Agreement extending the contract time or adjusting the contract price;
- (4) Relieve the contractor from compliance with the requirements of the contract or result in the approval of a deviation, exception to or other variation from the contract. Failure to include an element of work required by the contract in the schedule does not release or relieve the contractor from responsibility to perform such work.

In preparing, developing and updating the Project Schedule the contractor shall not utilize:

- (1) Float suppression techniques in the schedule, including interim dates imposed by the contractor other than project milestone(s);
- (2) The inclusion of activities or constraints in a path or chain leading to a project milestone which are unrelated to the work as specified in the contract;
- (3) Activity durations or sequences determined by the Department to be unreasonable in whole or in part.

The contractor shall not use preferential sequencing, whereby activities that could be performed concurrently and are established in the Project Schedule as sequential simply to consume float. The contractor shall not indicate artificial activity durations by inflating activities in the schedule to consume float and influence the Critical Path.

Sequestering of float is cause for rejection of the contractor's schedule submittal. If float sequestering is identified, the contractor shall revise the schedule appropriately.

Total Float is a commodity available to both the Department and the contractor for sequential use until depleted and not for the exclusive use or financial benefit of either party. A schedule showing an early completion date shall show the time between the scheduled completion date(s) and the required contract completion deadline(s) as Total Float.

The Department will not be liable to the contractor for delays by any party when the contractor completes the work prior to expiration of contract time.

If a delay in performing the work is caused by the Department, the contractor shall immediately notify the Department in writing that a revision to the contract is necessary in accordance with Subsection 104.02 and Subsection 104.03 of the specifications. The contractor shall include a description of the cause of delay, the projected amount of Total Float to be used, and the revised Monthly Progress Schedule showing the use of the Total Float in the Monthly Progress submittal. The contractor shall work cooperatively with the Department, other contractors, and third parties to identify and implement, to the maximum extent possible, no-cost measures to recover all schedule delays, regardless of the cause of the delays.

The contractor shall coordinate with the Department, local governmental entities, utility companies, railroad companies, and any third party entities when developing and maintaining the Project Schedule. The contractor shall coordinate its planning and scheduling efforts as required to address conflicts and comments received from adjacent projects and other entities.

(C) BLANK:

(D) Baseline Schedule:

The contractor shall submit a Baseline Schedule before or at the Preconstruction Conference for the Engineer's review and approval.

The Baseline Schedule shall be in the following format:

- i. Project ID: The schedule project ID shall match the filename format in Subsection 108.12(K) of the specifications. The project name shall be the route number followed by the project description.
- ii. Activity ID: Each activity shall be assigned a unique identification number. Activity ID numbers shall not be changed or reassigned for the duration of the contract. Within each group of the WBS, activity ID's shall be numbered sequentially in increments of 10 in the order of

their start date or by finish date of a finish milestone. Milestone activities shall begin with “M”. Use 10 characters or less.

- iii. Activity Name: Each activity shall be defined with a unique name that contains the description of work. Each name shall at a minimum consist of a verb or work function (i.e. remove, excavate, form, install), an object (i.e. curb, pipe, footing) and a location (i.e. street, station, bridge number). For example, “Install Barrier Dtl C – S1 120+25 Lt”. The activity quantity may be included after location.

The contractor shall create an activity name using the following:

- a) Use 50 characters or less;
- b) Use “S1, S2, ...” for stage naming if applicable;
- c) Do not use all capital letters;
- d) Keep names readable, but use abbreviations as needed. Do not use periods when abbreviating. All abbreviations shall be consistent; and
- e) Location is not required if object name is specific, such as “CMP #201”.

The contractor shall provide a list of abbreviations and acronyms. The work related to each activity shall be limited to one stage, one area, one traffic control phase, and one responsible party of the contract.

- iv. Activity Code: Activities shall be assigned with project activity codes that will be used to classify, categorize and organize activities for reporting. Only use project level activity codes and not global or enterprise codes. At a minimum, all activities shall have an activity code for responsible party, stages, and phases. Additional activity codes shall be added if requested by the Department.
- v. Milestones: The contractor shall separately identify each project milestone, conforming to the scheduling requirements set forth in the contract.
- vi. Constraints: The contractor shall not use date constraints to logically begin or complete a project activity unless specific calendar dates are shown in the contract. Specific contract dates may only be applied as a constraint to a milestone activity and input as either a “Start on or

After” or “Finish on or Before” date. No other constraint types shall be allowed.

- vii. Duration: Activity duration shall not exceed 20 calendar days unless approved by the Engineer. Activity durations shall be at least one calendar day. Durations shall represent the anticipated productivity rates that factor in all limitations to the productivity. Long lead activities such as procurement and Level of Effort activities may exceed 20 calendar days.
- viii. Relationships: All activities shall have at least one predecessor and one successor except for the project start and project end milestones. Negative lags or negative floats shall not be allowed. Predecessors and successors shall not be linked to the same activity with different relationship types. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with succeeding activities. Do not use Start-to-Finish relationships. Do not use Finish-to-Start relationships with a lag or overlap.
- ix. If applicable, the schedule shall include but not be limited to all activities below:
 - 1. Mobilization/Demobilization;
 - 2. Right of Way Acquisition;
 - 3. Submittal development;
 - 4. Submittal review and acceptance;
 - 5. Submittal and approval of material samples and mix designs;
 - 6. Submittal and approval of shop drawings;
 - 7. Long lead items, material and equipment procurement;
 - 8. Procurement of permits;
 - 9. Environmental commitments and mitigation activities;

10. Equipment and plant setup;
 11. Fabrication of special items;
 12. Erection and removal of falsework and shoring;
 13. Utility and railroad relocations;
 14. Cure times for concrete;
 15. Cure times for pavement before striping;
 16. Landscape and seeding establishment periods;
 17. Test periods;
 18. Major traffic stage changes;
 19. Substantial completion;
 20. Punchlist completion; and
 21. Final cleanup;
- x. The schedule shall be in detail to allow day-to-day monitoring and review of the contractor's operations. It shall show the order and interdependence of activities and the sequence of work.
 - xi. The contractor shall detail the Critical Path activities and logic ties in the schedule to show the work sequencing. The contractor shall use the CPM software to determine the controlling activities in the critical path. The critical activities shall be prominently distinguished on all reports by the use of color or pattern.
 - xii. The contractor shall provide the number of activities to assure adequate project planning and allow for monitoring and evaluation of work progress.

- xiii. The contractor shall provide activities as necessary to depict third-party work related to the contract. Third-party work activities may include but is not limited to railroads, utilities, real estate, and government agencies.
- xiv. Seasonal, winter shutdown, traffic, special event, environmental, or other contract restrictions shall be considered and included in the schedule for all work. These restrictions shall be addressed with project calendars and shown as non-work days for each major work type. Global calendars shall not be used. Examples of major work types are earthwork, concrete paving, structures, asphalt, drainage, landscaping, etc. The contractor shall include project calendar for curing time if applicable.
- xv. The duration for each activity shall include the anticipated production rate and the time for anticipated weather stoppages. The contractor shall not reserve random non-work days in a project calendar to account for weather stoppages.
- xvi. The schedule shall have a Data Date of the start date shown in the Notice of Award letter.
- xvii. When processing the schedule in the software, the contractor shall use the following options:
 - 1. When scheduling progressed activities use Retained Logic;
 - 2. Calculate start-to-start lag from Early Start;
 - 3. Define critical activities as Longest Path;
 - 4. Compute Total Float as $\text{Finish Float} = \text{Late Finish} - \text{Early Finish}$; and
 - 5. Calendar for scheduling relationship lag as predecessor activity calendar.
- xviii. The bar chart schedule plot shall be accompanied by a schedule report of the network with a tabulation of the following data for each activity:

1. Activity ID;
2. Activity name;
3. Original duration;
4. Early start date;
5. Early finish date;
6. Late start date;
7. Late finish date;
8. Predecessors;
9. Successors;
10. Free float;
11. Total float;
12. Primary constraint date;
13. Calendar; and
14. Responsibility for activity - e.g., prime contractor, subcontractor, supplier, etc.

(E) BLANK:

(F) BLANK:

(G) Recovery Schedule:

If the Project Schedule indicates a late completion of the work by 28 or more calendar days, the contractor shall prepare a Recovery Schedule which demonstrates how the contractor intends to reschedule the activities to regain compliance with the contract.

Within ten working days of receipt of the Engineer's written direction, the contractor shall submit the Recovery Schedule to the Engineer. The contractor shall not be required to prepare a Recovery Schedule if the contractor requests and demonstrates, in writing, entitlement to extension of a completion deadline due to a Department caused delay, and the Engineer concurs that a Recovery Schedule is not required at that time. If the Engineer disputes the contractor's entitlement to a completion deadline adjustment, the contractor shall, within five working days, submit a Recovery Schedule that does not include a completion deadline adjustment.

Within five working days after a rejection by the Engineer of the Recovery Schedule, the contractor shall resubmit a revised Recovery Schedule incorporating the Department's comments. When the Engineer accepts the contractor's Recovery Schedule, the contractor shall, within five working days after the Engineer's acceptance, incorporate such schedule in the Project Schedule, deliver the same to the Department, and proceed in accordance with the approved Recovery Schedule.

All acceleration costs required to bring the contract work back into compliance with project milestones and the contract time due to a contractor caused delay shall be borne solely by the contractor. Whenever a Recovery Schedule is required, the contractor shall provide the following information:

- i. Transmittal letter;
- ii. Bar chart schedule plot;
- iii. Electronic copy of the file used for the proposed Recovery Schedule; and
- iv. Narrative describing all proposed changes to the Project Schedule in detail, with justification for the changes, including the following:
 1. Changes to activity original durations;
 2. Changes to activity relationships and schedule logic;
 3. Cause of schedule slippage and actions taken to recover schedule within the shortest reasonable time (e.g., hiring of additional labor, use of additional construction equipment, and expediting of deliveries);
 4. Float consumption;

5. Identification of activities that have been added, deleted, or modified; and

6. Changes to the Project Schedule's Critical Path.

(H) Revisions to Contract:

If the contractor receives a request for extra work from the Department or submits a contract change request in accordance with Subsection 104.02 of the specifications asserting that an event, situation, or change affects a Critical Path of the Project Schedule, the contractor shall prepare and submit a TIA showing the cumulative effect of the change on the completion or fixed milestone date along with a written report describing the time impact in a form satisfactory to the Department complying to Subsection 104.03 of the specifications.

Each TIA shall include a fragmentary network (fragnet) demonstrating the following information:

- i. How the contractor proposes to incorporate a time extension provided for in a Supplemental Agreement;
- ii. The impact to the Project Schedule;
- iii. The sequence of new and/or existing activity revisions that are proposed to be added to the Project Schedule that is in effect when the change or delay is encountered;
- iv. The proposed method for incorporating the delay and its impact to the Project Schedule; and
- v. The computation of two finish dates. The first finish date shall be computed without consideration of impacts by the proposed revision. The second finish date shall be computed with consideration of impacts by the proposed revision.

If a proposed change in planned work results in altering the Critical Path or extending the schedule completion date, the contractor shall submit a Revised Schedule and a TIA within 15 calendar days of the proposed change.

(I) Record Schedule:

The contractor shall prepare a Record Schedule that includes actual start and actual finish dates for all activities. The Record Schedule, once approved, serves as the final update of the Project Schedule. The contractor shall include a written certification with the Record Schedule submittal signed by the Project Manager of the contractor in accordance with the following:

“To the best of my knowledge, the enclosed final update of the project Schedule reflects the actual start and completion dates of the activities for the project contained herein.”

The contractor shall submit the Record Schedule to the Engineer for review. Final acceptance will not be issued until the Record Schedule has been approved.

(J) Schedule Meetings and Three Week Look Ahead Schedule:

a. Baseline Schedule Presentation Meeting:

At a time agreeable to the Engineer, the contractor shall conduct a Baseline Schedule presentation meeting within seven calendar days after submitting the proposed Baseline Schedule. The purpose of this meeting is for the contractor to present and explain the contractor's schedule and construction phasing plan. At a minimum, the following is to be covered at the joint review of the schedule:

- (a) WBS;
- (b) Sequence of work - step through the schedule activity by activity;
- (c) Construction phasing including traffic control phasing and changes;
- (d) Resources to include number of construction personnel and production rates used; and
- (e) Critical Path review.

b. Weekly Project Meeting and Look-Ahead Schedule:

At the weekly project meetings, the contractor shall provide the Engineer with a detailed, Look-Ahead Schedule. The Look-Ahead Schedule is a computer generated bar chart schedule plot that shows the previous week's work and the work planned for the current and next three weeks. The contractor shall base the Look-Ahead Schedule on the Project Schedule and provide a greater breakdown of the Project Schedule activities for the purpose of materials inspection and testing. The Look-Ahead Schedule

shall clearly note and explain all departures from the Project Schedule. The contractor shall reference the Project Schedule activity ID numbers, WBS, and define subsequent specific daily operations for all work activities scheduled to be performed during the four-week period. The contractor shall identify work being performed by Disadvantaged Business Enterprise (DBE) firms as separate activities. At least one day before the weekly construction activity meetings, the contractor shall submit weekly Look-Ahead Schedules to the Engineer.

(K) Submittals:

Two 11 x 17 inch hard copies and one pdf copy of each schedule in color listed herein shall be provided to the Engineer. The contractor shall furnish to the Engineer for project use an electronic copy of the schedule. The electronic copy shall be Primavera P6 .xml file format prepared in Primavera software.

The filename of schedules shall be submitted in the following format:

SCHEDULE FILENAME FORMAT	
Preliminary Schedule	TTTTT-YYMM-PSVV
Baseline Schedule	TTTTT-YYMM-BSVV
Monthly Progress Schedule #1	TTTTT-YYMM-MPS01VV
Monthly Progress Schedule #2	TTTTT-YYMM-MPS02VV
Recovery Schedule	TTTTT-YYMM-RCYSVV
TIA Schedule	TTTTT-YYMM-TIASVV
Record Schedule	TTTTT-YYMM-RCDSVV
3 Week Lookahead Schedule	TTTTT-YYMM-LASVV
Schedule Narrative	TTTTT-YYMM-NARVV
Note: (1) TTTTT: First 5 digits of project TRACS number. (2) YYMM: Current 2 digit year and month. (3) VV: 2 digit version number (01, 02, etc.).	

All bar chart schedule plots shall be in color and have a size and scale acceptable to the Engineer. Include a title block and a legend on each page. The plot layout shall include a schedule activity table with corresponding bar chart. The activity table shall be grouped by the WBS and include the activity ID, activity name, duration, start date, finish date, and total float. All activities in the bar chart shall be plotted on their start and finish dates. Show relationship lines and data date line. The bar chart shall be time-scaled in two-line format with a date interval set to year/month and type set to calendar.

The contractor shall provide two 8.5 x 11 inch hard copies of the narrative and monthly report with an electronic pdf copy.

The contractor shall provide a schedule log file generated by the software in a .txt file format with all schedule submittals. The log file shall have the same filename as the schedule file. The contractor shall review the log file prior to submittal to verify that the electronic schedule is in compliance with this specification.

(L) Software:

The automated system software shall be Primavera P6.

(109FAEU, 08/15/24)

SECTION 109 MEASUREMENT AND PAYMENT:

109.04(D)(3)(a) Rental Rates (Without Operators): the equation of the first paragraph of the Standard Specifications is revised to read:

The hourly equipment rental rate (HERR) will be determined by the following formula:

$$\text{HERR} = F \times \left[\frac{1.15 \times R}{176} \right] + \text{HOC}$$

Where: F= Adjustment Factor to R is 0.933
R= Current RRBB Monthly Rate
HOC= Hourly Operating Cost

(109FASUB, 05/21/26)

SECTION 109 MEASUREMENT AND PAYMENT:

109.04(D)(7) Force Account Work by Subcontractors: the first paragraph of the Standard Specifications is revised to read:

When force account work is determined by the Engineer to require specialized labor or equipment not normally utilized by the contractor, and such force account work is performed by subcontractors, the contractor will be allowed a supplemental markup of 5 percent of the subcontractor's costs plus the applicable tax and bond as specified in Subsection 109.04(D).

(109RRBB, 04/18/24)

SECTION 109 MEASUREMENT AND PAYMENT:

109.04(D)(3) Equipment: the first paragraph of the Standard Specifications is revised to read:

Equipment which the Engineer considers necessary for the performance of work will be eligible for payment at the established rates only during the hours that it is operated except as otherwise allowed elsewhere in these specifications. Equipment hours will be recorded to the nearest one-half hour. For the use of equipment owned by the contractor and approved by the Engineer, the contractor will be paid the rental rates, as modified herein, outlined in the Rental Rate Blue Book® (RRBB) for Construction Equipment which is updated by EquipmentWatch™, a division of Fusable, 3200 Rice Mine Road NE, Tuscaloosa, Alabama 35406, phone (888) 307-1713. All rate determinations will be based on the RRBB quarterly rate revisions that are applicable at the time equipment is being used.

(109WFADF, 05/15/25)

SECTION 109 MEASUREMENT AND PAYMENT:

109.04(D)(6) Statements: the title and text of the Standard Specifications is revised to read:

109.04(D)(6) Forms:

The contractor shall prepare the Weekly Force Account Detail form for each week of force account activity. The Weekly Force Account Detail form is a standardized, fillable form made available by the Department on the ADOT Construction Group's website.

The form shall detail the labor, equipment, and material charges utilized to accomplish the force account work along with all supporting documentation. The contractor shall furnish copies of original receipts (paid invoice cost) for materials, rental equipment cost, including freight and transportation charges, copies of rental rate blue book equipment sheets and certified payrolls.

If materials used on the force account work are not specifically purchased for such work but are taken from the contractor's stock, then instead of invoices, the forms shall contain or be accompanied by an affidavit of the contractor certifying that such materials were taken from stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the contractor.

Force account work shall be tracked daily; however, the contractor shall compile no more than one full week's worth of daily records into a Weekly Force Account Detail

form. Each reporting period runs from Saturday through Friday. The contractor shall submit the form within 30 calendar days of the respective week's force account performance. The completed form shall be submitted to the Engineer for review and approval. The Engineer will review the form and supporting documentation against the ADOT Inspector's Daily Force Account Reports, and will verify that the form is timely, complete, and accurate. Payment will not be made until the contractor has furnished applicable forms, detailing the costs of the force account work, including but not limited to the following information:

- (a) Labor: name, classification, date, daily hours, hourly rate and fringe rate, and certified payrolls for each foreman and laborer.
- (b) Equipment: dates, equipment number, description, operator name, hours used, approved stand-by hours, monthly rental rate, hourly operating cost and rental rate blue book sheets for each unit of equipment.
- (c) Rental Equipment (Third Party): invoice, dates used, vendor name, description of equipment, operator name, hours used, invoice rate, hourly operating cost and rental rate blue book sheets for each rental equipment.
- (d) Materials: invoice, date used, supplier name, description, quantity, unit of measure and unit cost.
- (e) Transportation: freight and express charges on materials, FOB jobsite.

(109RET, 10/20/22)

SECTION 109 MEASUREMENT AND PAYMENT:

109.06(B)(3) Partial Payment: of the Standard Specifications is modified to add:

Notwithstanding any provision of Arizona Revised Statutes Section 28-6924, the parties may not agree otherwise.

109.06(B)(4) Final Payment: of the Standard Specifications is modified to add:

Notwithstanding any provision of Arizona Revised Statutes Section 28-6924, the parties may not agree otherwise.

109.06 Partial Payments and Retention: of the Standard Specifications is modified to add:

(C) Payroll Submittals:

The contractor shall submit payrolls electronically through the internet to the Department's web-based certified payroll tracking system. This requirement shall also apply to every lower-tier subcontractor that is required to provide certified payroll reports.

If, by the 15th of the month, the contractor has not submitted its payrolls for all work performed during the preceding month, the Engineer will provide a written notification of the discrepancies to the contractor. For each payroll document that the contractor fails to submit within 10 days after the written notification, the Department will retain \$2,500.00 from the progress payment for the current month. The contractor shall submit each complete and correct payroll within 90 days of the date of notification. If the payroll is complete and correct within the 90-day time frame, the Department will release the \$2,500.00 on the next monthly estimate. For each payroll that is not acceptable until after the 90-day time frame, the Department will only release \$2,000.00 of the \$2,500.00 retained. The Department will retain \$500.00 as sanctions. Such \$500.00 retentions will not relieve the contractor of its responsibility to provide each required payroll, complete and correct, as specified above. These sanctions shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

(109SUBPAY, 10/20/22)

SECTION 109 MEASUREMENT AND PAYMENT:

109.06(B)(5) Payment Reporting and Sanctions: the eighth paragraph of the Standard Specifications is revised to read:

For each month that the contractor fails to submit timely and complete payment information the Department will retain \$5,000 as sanctions from the monies due to the contractor. After 90 consecutive days of non-reporting, the sanctions will increase to \$10,000 for each subsequent month which the contractor fails to report until the information is provided. These sanctions will be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

109.06(B)(8) Non-compliance: of the Standard Specifications is revised to read:

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 Department deems appropriate, which may include but are not limited to:

Sanctions. These sanctions will be in addition to all other retention or liquidated damages provided for elsewhere in the contract:

The Department will withhold two times the dollar amount not paid to each subcontractor;

If full payment is made within 30 days of the Department's payment to the contractor, the amount withheld by the Department will be released; and

If full payment is made after 30 days of the Department's payment to the contractor, the Department will release 75 percent of the funds withheld. The Department will retain the remaining 25 percent of the monies withheld as sanctions.

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 Department may, in addition, invoke the following remedies:

Withhold monthly progress payments until the issue is resolved and full payment has been made to all subcontractors, subject to the sanctions described in paragraph (a) above;

Terminate the contract for default in accordance with Subsection 108.10 of the specifications; and/or

Disqualify the contractor from future bidding, temporarily or permanently, depending on the number and severity of violations.

In determining whether the sanctions will be assessed, the extent of the sanctions, or additional remedies assessed, the State Construction Engineer will consider whether there have been other violations on this or other 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 State Construction Engineer, escalate the decision to the State Engineer. If the contractor does not escalate the decision of the State Construction Engineer, in writing to the State Engineer, 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. If the contractor escalates the decision to the State Engineer, and the contractor does not agree with the State Engineer's decision, the contractor may initiate litigation, arbitration or mediation pursuant to Subsection 105.21(D) and (E) of the specifications.

(109FUEL, 02/10/12)

SECTION 109 MEASUREMENT AND PAYMENT: of the Standard Specifications is modified to add:

109.12 Fuel Cost Adjustment:

(A) General:

The Department will adjust monthly progress payments up or down as appropriate for cost fluctuations in diesel fuel as determined in accordance with these special provisions.

A fuel cost adjustment will be made when fluctuations in the price of diesel fuel, in excess of 15 percent, occur throughout this contract. The Department will not provide such adjustments for fluctuations in the price of diesel fuel of 15 percent or less.

No adjustments will be made for fluctuations in the price of fuels other than diesel.

(B) Measurement:

The base index price of fuel will be determined by the Department from the selling prices of diesel fuel published by OPIS (Oil Price Information Service). The base index price to be used will be the price for Diesel fuel No. 2, Ultra Low Sulfur, PAD 5, City of Phoenix Rack. The reported average value for the Phoenix area will be used.

The base index price for each month will be the arithmetic average of the selling price for diesel fuel, as specified above, shown in the last four reports received prior to the last Wednesday of the month.

This price will be effective as of the last Wednesday of each month, and will be posted on the Department's website, at <http://www.azdot.gov/Highways/cns/bitmat.asp>, on or shortly after the last Wednesday of the month.

This price may also be obtained from Contracts and Specifications Services at (602) 712-7221.

This price will be deemed to be the "initial cost" (IC) for diesel fuel on projects for which bids are opened during the following month.

The current index price for diesel fuel in subsequent months will be the base index price, determined as specified above, for the current month. For example; an adjustment for diesel fuel used in May, if applicable, will be based on the "current price" (CP) for May as posted on the last Wednesday of May. The amount of adjustment per gallon will be the net difference between the "initial cost," adjusted by 15 percent, and the current index price. The monthly adjustment will be determined by the Engineer and

included in the payment estimate as a fuel adjustment. For fluctuations in excess of 15 percent, fuel cost adjustments will only be made for current price index increases greater than 1.15 times the "initial cost" or for decreases less than 0.85 times the "initial cost." No calculation will be made for fluctuations in the current index price of 15 percent or less when compared to the "initial cost."

The number of gallons of diesel fuel used per month will be considered to equal 1.5 percent of the dollar amount of work reported by the contractor for each month. Such dollar amount will not include incentives earned by the contractor for pavement smoothness, thickness, or strength for Portland cement concrete pavements; for pavement smoothness or quality lots for asphaltic concrete pavements; for any other revenue derived from quality incentives; or for revenue accrued in the previous month for bituminous material cost fluctuations or diesel fuel price adjustments.

A monthly adjustment, if applicable, will be made on this quantity, as shown below:

$$S = \frac{0.015(Q)}{IC} \times (CP - AC)$$

Where; S = Monetary amount of the adjustment (plus or minus) in dollars
Q = Dollar amount of work completed for the month
CP = Current index price in dollars per gallon
AC = Adjusted "initial cost" (1.15 or 0.85 times IC) in dollars per gallon
IC = "Initial cost" as determined above, dollars per gallon

If adjustments are made in the contract quantities, the contractor shall accept any fuel adjustment as full compensation for increases or decreases in the price of fuel regardless of the amounts of overrun or underrun.

The value calculated above (plus or minus) will be adjusted to include sales tax and other taxes as applicable.

No additional compensation will be made for any additional charges, costs, expenses, etc., which the contractor may have incurred since the time of bidding and which may be the result of any fluctuation in the base index price of diesel fuel.

No adjustments will be made for work performed after Substantial Completion, as defined in Subsection 105.19, has been achieved.

(C) Payment:

Price adjustments will be shown on the monthly progress estimate, but will not be included in the total cost of work for determination of progress or for extension of contract time.

(201MTBRN, 10/18/10)

SECTION 201 - CLEARING AND GRUBBING:

201-3.02 Removal and Disposal of Materials: the second and third paragraphs of the Standard Specifications are revised to read:

In the disposal of all tree trunks, stumps, brush, limbs, roots, vegetation and other debris, the contractor shall comply with the requirements of Title 49, Chapter 3, of the Arizona Revised Statutes, and with the Rules and Regulations for Air Pollution Control, Title 18, Chapter 2, Article 6, adopted by the Arizona Department of Environmental Quality pursuant to the authority granted by the Arizona Administrative Code.

Burning of trash, debris, plant material, wood, or any other waste materials will not be allowed.

(201PAY, 07/15/21)

SECTION 201 CLEARING AND GRUBBING:

201-5 Basis of Payment: of the Standard Specifications is modified to add:

When clearing and grubbing is not included as a contract pay item, full compensation for any clearing and grubbing necessary to perform the construction operations designated on the project plans or specified in the Special Provisions shall be considered as included in the price of contract item.

SECTION 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS: the first paragraph of the Standard Specifications is hereby deleted:

SECTION 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS:

202-3.03(B) Bituminous Pavement: of the Standard Specifications is modified to add:

Upon removal, the disposal of the existing asphaltic concrete shall be the responsibility of the contractor.

ITEM 2020057 - REMOVE AND SALVAGE (MESQUITE TREES):

Description:

The work under Remove and Salvage (Mesquite Trees) shall consist of removing and salvaging of trees, 6 inches or greater in diameter, and removing and disposing of entire tree stumps, as directed by the Engineer.

Construction Requirements:

The contractor shall examine the project site before submitting a proposal in accordance with the requirements of Subsection 102.07 of the specifications.

Remove and Salvage Mesquite Trees will require the removal and salvaging of trees and the removal and disposal of the entire tree stump to 6 inches below existing grade. Any voids left from tree removal shall be replaced with suitable borrow material, unless it will be within 6 inches of proposed grade, where it then shall be replaced with properly compacted aggregate base course.

Removed tree stumps shall become the property of the contractor and shall be disposed of off the project site.

All Mesquite wood, trunks and branches measuring in excess of 1-1/2" diameter shall be cleaned of any thinner branches and foliage and cut into approximately 18" lengths.

The contractor shall deliver the harvested wood to the San Xavier District maintenance yard (2018 W. San Xavier Road, Tucson, AZ) and stockpile at a location north of the Maintenance Building, as directed by the Engineer.

Double, triple or multi-trunk trees shall be considered one tree in the case that it is attached to one root ball.

Trees of 6 inches or more in diameter at breast height shall be removed as directed by the Engineer. Diameter at breast height is measured at 4.5 feet above the high-ground side of the tree.

Trees shall be cut parallel to the slope and to within two inches above the ground level.

The contractor shall coordinate with the Engineer to ensure that tree removal will comply with the Arizona Native Plant Law, Clean Water Act (CWA) Section 404 regulations, Section 404 permit and project-specific stipulations.

In the disposal of all tree debris, the contractor shall comply with the requirements of Title 49, Chapter 3, of the Arizona Revised Statutes, and with the Rules and Regulations for Air Pollution Control, Title 18, Chapter 2, Article 6, adopted by the

Arizona Department of Environmental Quality pursuant to the authority granted by the Arizona Administrative Code.

Method of Measurement:

Remove and Salvage (Mesquite Trees) will be measured as a unit for each.

Basis of Payment:

The accepted quantities of Remove and Salvage (Mesquite Trees), 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 the removal and disposal of the entire tree stump.

Removal and salvaging of trees with trunk sizes less than 6 inches in diameter will not be measured and will be considered as included in the price of contract items.

ITEM 2020061 REMOVE AND RELOCATE MAILBOXES:

Description

The work under Remove and Relocate Mailboxes shall consist of removing, relocating, and reinstalling the existing mail receptacle in accordance with PAG Standard Detail No. 102, the project plans and these Special Provisions.

Materials

Materials for new mailbox posts and foundations shall be as specified in PAG Standard Detail No. 102.

Construction Requirements

During construction, mail boxes may need to be temporarily placed in five gallon buckets filled with aggregate base material (as required due to contractor's schedule) in a location that mail carriers will have access to. Buckets shall only be used where the outside lane is barricaded from traffic use. Buckets shall have addresses identified on the side with paint for easy identification.

For the permanent installation, the contractor shall video tape the location of the existing mail box prior to the start of construction to re-establish the layout sequence of the grouping.

New mailboxes shall be installed at the completion of work as indicated in PAG Standard Detail No. 102. If the Engineer determines that the existing mailbox is serviceable, it may be remounted with new hardware on a new post and foundation;

otherwise the contractor shall provide and install a new, similarly sized mailbox on a new post and foundation. The contractor shall coordinate the permanent location of the mail boxes with the local post office.

Method of Measurement

Remove and Relocate Mailboxes will be measured and paid for as a unit each, complete in place.

Basis of Payment

Remove and Relocate Mailboxes, measured as provided above, will be paid for at the contract unit price each. This item shall include videoing the existing location of the mail box, removal of the existing mailbox, temporary relocation(s) of the existing mailbox including bucket and aggregate base material, mounting hardware, post, foundation, and all labor materials and incidentals required to complete the work.

(203ERWK, 07/16/20)

SECTION 203 EARTHWORK:

203-9.02 Materials: the last sentence of the Standard Specifications is revised to read:

Borrow placed within three feet of the finished subgrade elevation shall conform to the following requirement:

$PC + (2.83 \times PI)$ shall not exceed 36,

where:

PC = Percent of material passing the No. 200 sieve (determined in accordance with Arizona Test Method 201), and

PI = Plasticity Index (determined in accordance with AASHTO T 90).

(303RASBAB, 04/18/24)

SECTION 303 AGGREGATE SUBBASES AND AGGREGATE BASES:

303-2 Materials: of the Standard Specifications is revised to read:

Aggregate for the various classes of aggregate subbases and aggregate bases shall consist of stone, gravel or other approved inert material of similar characteristics, and shall be clean and free from vegetable matter and other deleterious substances.

Aggregate subbase and aggregate base material may be comprised of processed salvaged asphaltic concrete, processed salvaged aggregate base material, processed salvaged Portland Cement Concrete materials, virgin aggregate base materials or any combination of these materials meeting the requirements of Table 303-1. These materials may be from a specific project site or approved commercial source. Processed salvaged materials shall conform to the requirements specified in AASHTO M 319.

Aggregate subbases and aggregate bases shall conform to the requirements of Table 303-1:

TABLE 303-1										
Class of Aggregate	Percent Passing Sieve (Inch or No.)									PI, Max.
	3	1-1/2	1	3/4	1/4	4	8	30	200	
1		100	90 - 100				35 - 55		0 - 8.0	3
2		100	90 - 100			38 - 65	25 - 60	10 - 40	3.0 - 12.0	3
3										
4	100				35 - 70				0 - 10.0	5
5	100				30 - 75				0 - 10.0	5
6										

Notes:

- (1) The PI (Plasticity Index) will be determined in accordance with the requirements of AASHTO R 58, T 89, and T 90.
- (2) Classes 1, 2 and 3 are bases; Classes 4, 5 and 6 are subbases.
- (3) The requirements for Class 3 and for Class 6 will be specified in the Special Provisions.
- (4) For Class 1 through Class 4 aggregate, the amount of one fractured face

coarse aggregate particles shall be at least 50 percent.

- (5) Resistance to abrasion for Class 1 through Class 4 aggregate will be determined in accordance with the requirements of AASHTO T 96 and shall meet the following requirements:

Maximum loss of 12 percent at 100 revolutions

Maximum loss of 40 percent at 500 revolutions

- (6) When determining gradation of aggregate subbase or aggregate base material containing processed salvaged asphaltic concrete materials, drying to a constant weight shall be performed at a temperature of 140 ± 5 F, in accordance with the requirements of AASHTO T 265.

Aggregate subbase and aggregate base material not conforming to the requirements of Table 303-1 for gradation and/or PI may be accepted by the Engineer upon the contractor's submittal of testing results demonstrating that the R-Value is at least 79 when determined by AASHTO T 190. At the contractor's option, the material may be reprocessed and re-compacted at no additional cost to the Department.

All metal reinforcement and expansion materials shall be removed from processed salvaged Portland Cement Concrete prior to its use in aggregate subbase and aggregate base material.

The contractor shall submit the testing information for the base and subbase materials which are intended to be used to the Engineer for approval. Any significant change in the materials shall be approved by the Engineer prior to use.

Mixing on grade shall be accomplished using a full depth reclamation machine or pulverizer, manufactured for this purpose. Motor graders, gannon boxes, auger scrapers, or other similar devices will not be allowed for mechanical mixing on grade.

If suitable in-place aggregate subbase or aggregate base materials are available, the contractor shall have the option of re-using such materials as processed salvaged aggregate base. Processed salvaged asphaltic concrete and salvaged Portland Cement Concrete materials may be blended with the processed salvaged aggregate subbase, processed salvaged aggregate base and virgin base aggregates. The blended material shall be homogenous mixture in which there is no segregation, crusts, lumps, or nesting, and shall be sampled and tested to meet the requirements specified herein.

303-3.01 Placement: of the Standard Specifications is modified to add:

When processed salvaged materials are utilized, either from in-place or from a commercial source, the Engineer may require a test section of 1000 feet be placed utilizing the processed materials and construction methods proposed for use by the contractor. Full operations shall not proceed until the test section has been tested and approved by the Engineer. The contractor shall use the same equipment, material processing, and construction methods for the remainder of the construction, unless adjustments made by the contractor are approved in advance by the Engineer.

303-3.02 Compaction: of the Standard Specifications is revised to read:

Each layer of aggregate subbase and aggregate base material shall be compacted to a density of not less than 100 percent of the maximum density determined in accordance with the requirements of the applicable test methods of the ADOT Materials Testing Manual, as directed and approved by the Engineer.

The moisture content shall be determined per AASHTO T 265 when determining density for aggregate subbase and aggregate base material containing processed salvaged asphaltic concrete and/or processed salvaged Portland Cement Concrete.

When AASHTO T 265 is utilized to determine moisture content, acceptance testing results for density will be furnished to the contractor up to 24 hours after performance of in-place density testing to allow sufficient time for moisture determination.

303-5 Basis of Payment: of the Standard Specifications is revised to read:

The accepted quantities of aggregate subbase and aggregate base, measured as provided above, will be paid for at the contract unit price per cubic yard, which price shall be full compensation for the work, complete in place.

(404BITUM, 08/18/22)

SECTION 404 BITUMINOUS TREATMENTS:

404-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing all materials and constructing or applying bituminous treatments at the locations designated on the plans and in accordance with the requirements of the specifications and in conformity to the lines shown on the project plans or established by the Engineer.

The bituminous treatments include one or a combination of prime coat, tack coat, and fog coat. The bituminous treatments also include emulsified asphalt chip seal and hot applied chip seal both either with or without fog coat.

When a "hot applied" chip seal is called for on the plans and specifications, it refers to a chip seal using a performance grade asphalt cement or a crumb rubber asphalt as the bituminous material.

404-2.02 Aggregate Materials:

(A) General: the second and third paragraphs of the Standard Specifications are revised to read:

With the exception of precoated cover material, aggregate material shall be sampled for gradation acceptance from the final stockpile prior to being incorporated into the work. The aggregate for the precoated material shall be sampled prior to precoating.

(B) Blotter Material: of the Standard Specifications is revised to read:

Blotter material shall be natural or manufactured sand, volcanic cinders, or other approved material and shall be free of deleterious materials or foreign substances.

The gradation shall meet the following requirements when tested in accordance with the requirements of Arizona Test Method 201:

Sieve Size	Percent Passing
3/8 inch	100
No. 4	80 - 100
No. 16	45 - 80
No. 200	0 - 5.0

(C) Cover Material: of the Standard Specifications is revised to read:

Aggregate for cover material shall be clean gravel or crushed rock, shall be free of clay, and shall not contain calcium carbonate, caliche, synthetic materials, organic matter, or foreign substances. Cover material shall not be obtained from sweepings of previously applied cover material.

The gradation shall meet the following requirements when tested in accordance with the requirements of Arizona Test Method 201.

Sieve Size	Percent Passing	
	Class 1	Class 2
3/4 inch	100	
1/2 inch	97 – 100	100
3/8 inch	70 – 100	97 – 100
1/4 inch	0 – 10	70 – 100
No. 8	0 – 5	0 – 5
No. 200	0 - 2.0	0 - 2.0

Cover material shall meet the following requirements:

Aggregate Characteristics	Test Method	Requirement
Abrasion	AASHTO T 96	100 Rev., Max 9% 500 Rev., Max 40%
Carbonates	Arizona Test Method 238	Maximum 20%
Fractured Coarse Aggregate Particles	Arizona Test Method 212	Minimum 75% one fractured face, determined on plus No. 8 material
Flakiness Index	Arizona Test Method 233	Maximum 20%
Bulk Oven Dry Specific Gravity	Arizona Test Method 210	2.350 – 2.850
Water Absorption	Arizona Test Method 210	0.0 – 2.5%

(D) Precoated Cover Material: of the Standard Specifications is revised to read:

For hot applied chip seals, the cover material shall be precoated with any grade of PG asphalt cement which meets the requirements of Section 1005 of the specifications. The precoating shall be accomplished by mixing at a central plant until the aggregate is evenly coated. The cover material shall have a minimum temperature of 250 degrees F at the time of precoating with asphalt cement. The cover material shall be precoated with approximately 0.40 to 0.60 percent asphalt cement, by weight of the aggregate. The final percentage of asphalt cement used for precoating will be as directed by the Engineer. Precoated cover material shall be dust free upon completion of coating and shall remain dust free prior to being incorporated into the work.

The aggregate for precoated cover material shall meet the requirements in Subsection 404-2.02(C) of the specifications prior to precoating with bituminous material.

No precoated cover material shall be stockpiled following precoating with asphalt cement for more than five calendar days prior to placement, unless otherwise approved by the Engineer.

404-2.03 Bituminous Treatment Material Types and Application Rates: of the Standard Specifications is modified to add:

The type of bituminous material for tack coat and approximate application rate shall be as specified in Subsection 404-4.02 of the specifications.

The bituminous material application rates provided in this Subsection are approximate, and are to be used for bidding purposes, and shall be modified as required herein. Final application rates for all materials shall be those required to ensure the most favorable outcome, as approved by the Engineer.

404-3 Construction Requirements:

404-3.01 Seasonal and Weather Limitations: of the Standard Specifications is revised to read:

General:

At any time, the Engineer may require that the work cease or that the work day be reduced in the event that weather conditions, either existing or expected, are anticipated to have an adverse effect upon the bituminous treatment.

Placement shall cease for the remainder of the day if sustained wind velocities in excess of 15 MPH occur at the project site.

(B) Prime Coat:

Bituminous material used for prime coats shall be applied to an existing aggregate surface only when the ambient temperature in the shade is at least 70 degrees F and when the existing aggregate surface is slightly damp.

(C) Fog Coat:

Bituminous material used for fog coats shall be applied to an existing pavement surface only when the surface is dry, the pavement surface temperature is at least 60 degrees F but does not exceed 175 degrees F, and the ambient temperature at the beginning of the application is at least 50 degrees F and rising but does not exceed 110 degrees F. The application of bituminous material shall be stopped when the ambient temperature is 55 degrees F or less and falling.

(D) Chip Seal:

The contractor's bid submittal and initial construction schedule shall adhere to the beginning and ending dates shown in Subsection 404-4.04(A) of the specifications. Bituminous material used for chip seal coats shall only be placed when the existing pavement surface is dry, the surface temperature is at least 85 degrees F, and the ambient temperature at the beginning of the application of bituminous material is at least 65 degrees F and rising. The application of bituminous material shall be stopped when the ambient temperature is 70 degrees F or less and falling.

No placement of bituminous material for chip seals shall occur if ambient temperatures are forecasted to be at or below 40 degrees F at any time during the day or night after placement.

For hot applied chip seals, no placement shall occur if ambient temperatures exceed, or are forecasted to exceed, 110 degrees F the day before, the day of, or the two days after placement.

404-3.02 Equipment:

(A) Distributor Truck: the first sentence of the first paragraph of the Standard Specifications is revised to read:

Distributor trucks shall be so designed, equipped, maintained and operated that bituminous material at the specified temperature may be applied uniformly on variable widths of surface at readily determined and controlled rates from 0.03 to 1.00 gallons per square yard, with uniform pressure, and with an allowable transverse variation from any specified rate not to exceed 10 percent or 0.02 gallons per square yard, whichever is less.

(A) Distributor Truck: the first sentence of the fourth paragraph of the Standard Specifications is revised to read:

Distributor truck spray bars shall be equipped with the appropriate size nozzles adjusted to the proper angle with the associated adjustment wrench to achieve maximum overlap of spray and an even application.

(B) Power Brooms: of the Standard Specifications is revised to read:

Power brooms shall be of the rotary or pickup type, capable of completely removing excess-blotter material, and cleaning without gouging or tearing the surface.

(D) Aggregate Spreaders: of the Standard Specifications is revised to read:

The application of blotter material shall be accomplished by means of a sand slinger or other equipment approved by the Engineer.

The application of cover material shall be accomplished by means of a calibrated spreader. The spreader shall be a self-propelled, computerized rate-controlled unit capable of an application width of 14 feet or greater. The spreader shall be in good mechanical condition, capable of applying the correct aggregate application rate uniformly across the spread width.

Chip spreader boxes shall be calibrated to ensure consistent discharge across all of the chutes except where the discharge is intentionally adjusted to compensate for site conditions and construction operations.

404-3.03 Traffic Control: of the Standard Specifications is hereby deleted.

404-3.04 Preparation of the Surface: of the Standard Specifications is revised to read:

The surface to be treated shall be thoroughly cleaned prior to applying bituminous material. Man holes, utility covers, and catch basins shall be protected prior to and during application of bituminous material. Self-propelled rotary power brooms, pickup brooms, and hand brooms shall be used immediately in advance of applying the bituminous material.

When a bituminous treatment is to be applied to an existing aggregate surface, the surface shall be uniformly smooth, firm and reasonably true to grades and cross sections as shown on the project plans, and shall be so maintained throughout the placing of the bituminous treatment. In no event shall a bituminous treatment be placed on a soft, uneven base. All holes, depressions or irregularities shall be repaired. All loose and unsuitable material shall be removed and replaced by suitable material, which shall be compacted to produce a dense uniform surface conforming to the adjacent area.

When required, the existing aggregate surface on which the bituminous treatment is to be placed shall be lightly bladed, watered and compacted immediately prior to the application of bituminous material. In extremely dry areas, additional light applications of water may be required prior to the application of the bituminous material to facilitate penetration of the bituminous material.

404-3.05 Application of Bituminous Material: the first, second and third paragraphs of the Standard Specifications are revised to read:

The types, grades, and approximate rates of application of bituminous material shall be as specified in Subsections 404-2.03 of the specifications. The application rates for chip seal coats shall be determined by the contractor in accordance with the requirements herein, subject to approval by the Engineer.

The rates to be applied may vary substantially because of different surface conditions within the project limits. The actual bituminous material application rate shall not vary more than 10 percent from the application rate specified or approved by the Engineer.

The bituminous material shall be uniformly applied to the prepared surface at the rate specified or approved by the Engineer and in one application.

404-3.05 Application of Bituminous Material: the seventh, eighth and ninth paragraphs of the Standard Specifications are revised to read:

In the event that any spots are missed in the application, or any areas develop that do not have a uniform spread or penetration, such areas shall be remedied without delay.

Care shall be taken to prevent the spraying or splattering of bituminous material on adjacent pavements, structures, curb, guardrail, vegetation, or any other object outside of the area designated for spraying.

Removal and disposal of unused bituminous material shall be the contractor's responsibility and at no cost to the Department.

404-3.06 Application of Blotter Material: of the Standard Specifications is revised to read:

The approximate application rate of blotter material, when required as a part of a bituminous treatment, shall be as specified in Subsection 404-2.03 of the specifications; however, the Engineer will specify the exact rate to be applied based on the characteristics of the bituminous treated surface. The specified application rates are based on the wet weight of material.

Blotter material, at the time of spreading, shall be wet but free from running water. Blotter material shall be spread uniformly to the treated surface in one or more applications for a total application rate as specified. Blotter material shall be applied at a time acceptable to the Engineer and before opening to traffic.

Any oversized aggregate or foreign material picked up during stockpiling or loading operations shall be eliminated before entering the spreader. Supplemental spreading or smoothing shall be done by hand methods where necessary.

Prior to final acceptance and when ordered by the Engineer, the contractor shall remove and dispose of any excess blotter material. Removal and disposal of excess blotter material shall be the contractor's responsibility and at no cost to the Department.

404-3.07 Joints: of the Standard Specifications is revised to read:

(A) General:

Transverse joints with the preceding work, at intersections, and at all existing pavements and structures shall be made by a method approved by the Engineer prior to the start of the work.

Longitudinal joints shall be overlapped between 2 to 6 inches.

Regardless of the width of the roadway to be sealed, the number of longitudinal joints shall be kept to a minimum. Longitudinal joints shall be located to the greatest degree obtainable to coincide with the painted lines between traffic lanes.

(B) Chip Seal:

Unless otherwise directed by the Engineer, transverse joints with the preceding work shall be made by placing building paper over the end of the previous application, and the joining application shall start on the building paper. Once the application process has progressed beyond the paper, the paper shall be disposed of as directed by the Engineer. Transverse joints at other locations shall be made by a method approved by the Engineer prior to the start of the work.

Joints shall be cleaned as deemed necessary by the Engineer prior to the application of bituminous material in the adjacent strip.

404-3 Construction Requirements: of the Standard Specifications is modified to add:

404-3.08 Opening to Traffic:

In the construction or application of bituminous treatments, no traffic or equipment will be permitted on the treated roadway surface until it has been established to the satisfaction of the Engineer that the treated roadway surface will not be damaged or marred under the action of traffic. No traffic of any description shall be allowed on any bituminous treatment until approved by the Engineer.

404-4 Prime Coat: the title and text of the Standard Specifications is revised to read:

404-4 Bituminous Surface Treatment:

404-4.01 Prime Coat:

The type of bituminous material and the approximate application rate shall be as specified in Subsection 404-2.03 of the specifications. The Engineer may adjust the actual application rate based on specific trials and visual observations performed on test areas for different base conditions.

When it is deemed necessary, areas having excess bituminous material shall be blotted with material as directed by the Engineer.

When directed by the Engineer, the surface of the completed prime coat shall be rolled with a pneumatic-tired roller.

The integrity of the prime coat shall be maintained at all times until the next course is placed or until final acceptance. In the event traffic has caused holes or breaks in the surface, such holes or breaks shall be repaired by the contractor.

404-4.02 Tack Coat:

Tack coat shall be applied prior to placing a bituminous mixture on a primed surface, an existing bituminous surface, or an existing Portland cement concrete pavement surface. Tack coat shall also be applied between each layer of bituminous mixtures. A light coat of bituminous material shall also be applied to edges or vertical surfaces against which a bituminous mixture is to be placed.

The contractor shall choose the bituminous material to be used for tack coat. The Engineer must approve the contractor's choice of bituminous material prior to its use.

The rate of application for the specific usage will be specified by the Engineer. The following table shows approximate tack coat application rates:

Type of Bituminous Material	Approximate Tack Coat Application Rates: Gallons / Square Yard		Payment Factor
	Prior to Placing ACFC or AR-ACFC	All Other Tack Coats	
Emulsified Asphalt (Special Type) – See Note (1) Below.	Not Allowed	0.12	0.7
Emulsified Asphalt (Other than Special Type)	0.08	0.08	1.0
Asphalt Cement	0.06 to 0.08	0.06 to 0.08	1.0
Note: (1) Emulsified Asphalt (Special Type) shall consist of Type SS-1 or CSS-1 emulsified asphalt diluted with water to provide an asphalt content of not less than 26 percent.			

The Engineer may adjust the application rate.

If emulsified asphalt of any type is used, it shall have broken before the bituminous mixture is placed.

Tack coat shall be applied only as far in advance of the placement of the bituminous mixture as is necessary to obtain the proper condition of tackiness. All traffic on a tack coat surface shall be minimized to the greatest extent possible. In no event shall more tack coat be applied in one day than will be covered by the bituminous mixture during that same day.

404-4.03 Fog Coat:

The type of bituminous material and the approximate application rate shall be as specified in Subsection 404-2.03 of the specifications. The material shall be diluted with one part water to one part bituminous material. The specified application rate is based

on the diluted material. The Engineer may adjust the actual application rate based on specific trials and visual observations performed on test areas for different pavement conditions.

When specified in Subsection 404-2.03 of the specifications, blotter material shall be applied following the application of bituminous material.

404-4.04 Chip Seal Coat:

(A) General:

The contractor shall prepare their bid submittal and initial construction schedule, submitted at the Preconstruction Conference as described in Subsection 108.03 of the specifications, based on the following beginning and ending dates for placement of the chip seal.

Average Elevation of Project, Feet	Beginning and Ending Dates
0 – 3499	March 15 – May 31
0 – 3499	September 1 – October 31
3500 – 4999	May 1 – September 30
5000 and over	June 1 – August 31

Any proposed placement deviating from the beginning and ending dates shall be detailed in the written schedule of construction submitted at the weekly meeting described in Subsection 108.04 of the specifications. No contract time extension will be granted for placement outside of the beginning and ending dates. Any placement deviating from the beginning and ending dates shall be at the sole risk of the contractor.

The type of bituminous material and the approximate application rate shall be as specified in Subsection 404-2.03 of the specifications. The type of cover material shall be as specified in Subsection 404-2.03 of the specifications.

The contractor shall determine the application rates and corresponding quantities of bituminous material and cover material for chip seal coat in accordance with Arizona Test Method 819. Application rates are subject to approval by the Engineer. Areas and locations anticipated to require adjustment to the rate(s) shall also be identified.

The application rates and performance of emulsified asphalt chip seals shall be evaluated using the Sweep Test in accordance with ASTM D7000.

The performance of hot applied chip seals shall be verified using the Vialit Retention Test in accordance with EN 1272-3, modified as necessary to account for the specific characteristics of the proposed chip seal.

The actual application rate shall be such that the aggregate is embedded approximately 70 percent (80 percent above 4,000 feet elevation) and excessive tracking of

bituminous material does not occur under construction equipment or when opened to traffic.

The actual rate of cover material to be applied shall be such that no more than 5 percent of the chips applied are removed during sweeping and approximately 20 percent void space exists between the aggregate particles once realigned after opening to traffic.

The proposed application rate(s), locations requiring adjustment, and the associated basis for each adjustment, shall be submitted to the Engineer for approval no later than five days following completion of the Pre-Activity Walkthrough as described in Subsection 404-4.04(B) of the specifications and at least five days prior to placement of the test strip.

The basis for any anticipated adjustments shall include use of one or more of the following:

- (a) Sand Patch tests performed in accordance with *STP762 Pavement Surface Characteristics and Materials*; Haydon, C.E. (ASTM, 1982),
- (b) Appendix B of Chip Seal Guide for Application and Construction; Pavement Preservation Committee of the Arizona Chapter of The Associated General Contractors (AGC-Arizona Chapter, 2013),
- (c) Arizona Test Method 742 for mean macrotexture.

The approved application rate(s) and adjustments shall be clearly marked at the corresponding locations and remain visible to equipment operators prior to placement.

At least 10 days prior to chip seal placement, the contractor shall submit a minimum 75-pound sample of uncoated cover material to the Engineer for testing. In addition to the submitted cover material, the contractor shall also submit 3 full gallons of emulsion (5 to 8 gallons for hot applied) in 1-gallon cans in accordance with the requirements of Arizona Test Method 103. The contractor shall also submit 40 pounds of granulated rubber if included in the bituminous material.

(B) Pre-Activity Walkthrough:

Prior to placement, the contractor shall conduct a Pre-Activity Walkthrough with all parties expected to work on the chip seal.

Locations where adjustments in application rate may be appropriate shall be documented.

A location for a test strip, approximately 1,000 feet in length shall be identified. If additional test strip locations are desired due to varying surface conditions, these shall also be identified.

Other factors or site conditions such as turn or deceleration lanes, changes in surface characteristics, crack fill, and recent patchwork which may affect placement of the chip seal coat shall also be identified. A description of any affecting conditions and the corresponding locations and action to be taken to minimize their impact shall be documented.

In addition to the requirements herein, the items contained on the checklists provided in AGC-Arizona Chapter's Chip Seal Guide for Application and Construction shall be considered.

(C) Chip Seal Test Strip:

Prior to the start of placement, all equipment used in the placement of the chip seal coat shall be verified to be in satisfactory operating condition and in accordance with the requirements herein.

Cover material shall be verified to have appropriate moisture and be in a condition consistent with that in which it existed at the time initial acceptance samples were obtained. Bituminous material certifications shall be verified to indicate that the required type of material is on hand. The bituminous material shall be at the proper temperature prior to application.

The chip seal test strip shall be a minimum of 500 linear feet. The existing pavement surface to receive the test strip shall be verified to have been adequately swept and cleaned and meeting the requirements herein. Anticipated application rates shall have been marked and clearly visible to equipment operators.

During placement of the test strip, all equipment shall be observed to confirm proper operation. The application rate of both the bituminous material and cover material shall be measured and verified using a catch-and-weigh "tarp" method. The application rate of the bituminous material shall also be measured and verified by means of a volume per area calculation using the distributor trucks calibrated thermometer and volume measuring gauge or device.

Rolling shall immediately follow placement of the cover material and be verified to be in conformance with the requirements herein.

For emulsion chip seals, the contractor shall broom the surface to remove excess cover material only after the emulsion has fully broken and cured sufficiently for maximum chip retention.

Prior to any subsequent placement, the test strip shall be observed to have adequate embedment of the cover material without excessive void space between the chips, stacking of chips, or accumulation of chips on the shoulders. If the condition of the test strip is not acceptable, adjustments shall be made as appropriate, and an additional test strip shall be performed.

(D) Application of Bituminous Material for Chip Seal:

The following bituminous material application requirements for chip seal are in addition to the requirements specified in Subsection 404-3.05 of the specifications.

Bituminous material shall not be applied a distance ahead of the chip spreader that results in excessive lag of the rollers allowing hot applied bituminous material to cool or emulsified bituminous material to break prior to achieving adequate embedment of the cover material.

When inclement weather is expected, only the amount of hot applied bituminous material which can receive adequately embedded cover material, or only the amount of emulsified asphalt that can receive adequately embedded cover material and has sufficiently broken, shall be placed prior to the start of inclement weather.

(E) Application of Cover Material:

Cover material shall be immediately and uniformly spread over the freshly applied bituminous material such that aggregate particles are securely adhered and will not roll, tumble, or be picked up during the rolling process. Any oversize aggregate or foreign material picked up during stockpiling or loading operations shall be eliminated before entering the aggregate spreader hopper. Supplemental spreading and smoothing shall be done by hand methods where necessary.

When emulsified asphalt is used, the cover material shall be at a saturated surface-dry condition at the time of spreading.

For hot applied chip seals, and when project conditions require, precoated cover material shall be at a sufficient temperature to facilitate adequate embedment.

(F) Rolling Cover Material:

Following the spreading of cover material, the surface shall be promptly rolled with self-propelled pneumatic-tired rollers. A minimum of three rollers shall be provided; however, a sufficient number of rollers shall be provided to cover the entire width of the material spread in one pass of the compactors and rolling shall continue until a minimum of three passes has been completed.

For chip seals with a hot applied bituminous material the first roller pass shall occur as soon as possible but no longer than 2 minutes after applying the aggregate. The third pass shall be completed quickly enough to embed the aggregate before the binder cools, and no longer than 15 minutes after the binder is applied.

(G) Removal of Loose Cover Material:

The cover material shall be removed by means of a power broom which shall be in good condition and of a design suitable for the work. The action of the broom shall be such that particles which are stuck to the bituminous material will not be dislodged.

For chip seals with an emulsified bituminous material, initial removal of all loose cover material shall not commence prior to two hours after placement or at such time that the Engineer has determined that the emulsion has sufficiently cured.

For chip seals with a hot applied bituminous material, the removal of loose cover material shall commence approximately 30 minutes after the final rolling is completed.

Initial removal of loose cover material shall occur prior to opening to traffic. All loose cover material shall be removed from the paved surface by brooming within 24 hours after application.

After the traffic free period as specified in Subsection 404-4.04(H) of the specifications, but prior to final removal of loose cover material, all traffic permitted by the Engineer shall not exceed 25 miles per hour.

If the Engineer determines that conditions are not conducive to obtaining the best results, brooming shall be discontinued until the Engineer has considered all conditions and has determined the best time for the removal of the cover material.

(H) Minimum Traffic-Free Period:

The minimum traffic-free period for a newly applied emulsion chip seal coat shall be three hours. The contractor's hauling equipment may use the new seal coat surface during the traffic free period at a speed not to exceed 15 miles per hour but shall not make sharp turns or brake abruptly.

(I) Fog Coat on New Chip Seals:

When specified in Subsection 404-2.03 of the specifications, a fog coat shall be placed on the new chip seal following the curing period. The type of bituminous material and the approximate application rate shall be as specified in Subsection 404-2.03 of the specifications. The material shall be diluted with one part water to one part bituminous material. The specified application rate is based on the diluted material. The Engineer may adjust the actual application rate based on specific trials and visual observations performed on test areas for different pavement conditions.

When specified in Subsection 404-2.03 of the specifications, blotter material shall be applied following the application of bituminous material.

(J) Contractor Quality Control:

The contractor shall be responsible for the chip seal design, performing quality control testing on materials, and designating an individual charged with constant observation and monitoring.

Need for an adjustment to application rates or a correction to process or equipment shall be communicated immediately to the necessary personnel.

The initial condition of equipment, materials, and the project and pavement surface conditions shall be documented. The performance and results of the test strip shall be documented. Observations of monitoring activities and quantification of application rates during the test strip and production shall be documented no less frequently than every other placement run.

The cause for any adjustments, including quantifying tests performed, the adjustments made, and the result of such adjustments with regard to acceptability and performance of the chip seal coat shall be documented.

404-5 Tack Coat: of the Standard Specifications is hereby deleted.

404-6 Fog Coat: of the Standard Specifications is hereby deleted.

404-7 Chip Seal Coat: of the Standard Specifications is hereby deleted.

404-8 Method of Measurement: the fourth paragraph of the Standard Specifications is revised to read:

The contractor shall be responsible to determine the amount of cover material that will be required to complete the work from the source(s) from which the cover material is obtained.

404-8 Method of Measurement: the sixth paragraph of the Standard Specifications is revised to read:

Measurement for payment will be made only for the quantity of bituminous material and for the quantity of aggregate material used in accordance with the requirements of the specifications.

404-9 Basis of Payment: of the Standard Specifications is revised to read:

The accepted quantities of the work under this section, complete in place, measured as provided above, will be paid for at the contract unit price as designated in the bidding schedule, except the contract unit price for the quantities of bituminous material will be adjusted on the basis of the test results in accordance with the requirements of Section 1005 of the specifications.

No measurement or direct payment will be made for precoating the cover material, material for precoating, rolling and removal of loose cover material, and removal of loose blotter material.

The contract unit price for each item of bituminous material except tack coat will be considered to include all costs for furnishing, hauling, handling, spreading, and mixing of the material as required.

The unit price for bituminous tack coat is deemed to be the cost to furnish, transport, and store asphalt cement or emulsified asphalt at the project location. Payment for

bituminous tack coat will be made at the unit price multiplied by the respective payment factor listed under Subsection 404-4.02 of the specifications, and adjusted to the nearest dollar.

Unless otherwise specified, the accepted quantity of bituminous tack coat, measured as provided above, will be paid at the contract unit price per ton adjusted as provided above which price shall be full compensation for furnishing, transporting, and storing the exact type, grade or designation of bituminous tack coat specified by the Engineer.

Unless otherwise specified, the accepted quantity of time to apply bituminous tack coat, measured as provided above, will be paid for at the contract unit price per hour which payment shall be full compensation for applying bituminous tack coat.

The bidding schedule quantity for tack coat is based on an estimated application rate of 0.06 gallons per square yard for each application shown on the project plans.

The unit price of bituminous material will be adjusted in accordance with the requirements of Subsection 109.16 of the specifications based on the "initial cost" of bituminous material between the date of bid opening and the date that the material is used on the project.

No measurement or direct payment will be made for furnishing, applying and removing blotter material, furnished in conjunction with the application of a prime coat.

No measurement or direct payment will be made for the maintenance or repair of a prime coat surface.

(409ACMS, 06/19/25)

SECTION 409 ASPHALTIC CONCRETE (MISCELLANEOUS STRUCTURAL): of the Standard Specifications is revised to read:

409-1 Description:

The work under this section shall consist of constructing Asphaltic Concrete (Miscellaneous Structural), hereinafter asphaltic concrete, by furnishing all materials, mixing at a plant, hauling and placing a mixture of aggregate materials, reclaimed asphalt pavement (RAP) if used, mineral admixture, and bituminous material (asphalt cement) to form a pavement course or to be used for other specified purposes, in accordance with the details shown on the project plans and the requirements of the specifications, and as directed by the Engineer.

The contractor shall acquire and make all arrangements for a source or sources of material, furnish a mix design which will meet the design criteria specified hereinafter, and provide all the equipment, materials, and labor necessary to complete the work.

409-2 Materials:

The bidding schedule quantity of asphaltic concrete is based on an estimated unit weight of 146 pounds per cubic foot.

409-2.01 Mineral Aggregate:

Mineral aggregate shall conform to the following requirements when tested in accordance with the applicable test methods.

Mineral Aggregate Characteristics	Test Method	Requirement
Combined Bulk Oven Dry Specific Gravity	Arizona Test Method 251	2.350 - 2.850
Combined Water Absorption	Arizona Test Method 251	0 – 3.0%
Abrasion	AASHTO T 96	100 Rev., Max 9% 500 Rev., Max 40%
Sand Equivalent	AASHTO T 176 (After thoroughly sieving the sample, no additional cleaning of the fines from the plus No. 4 material is required.)	Minimum 55
Fractured Coarse Aggregate Particles	AASHTO T 335	Minimum 70% (plus No. 4 material)
Carbonates (1)	Arizona Test Method 238	Maximum 20%

Notes:

(1) Testing for carbonates only applies if either of the following conditions exist:

(a) The asphaltic concrete is the designed final pavement surface normally used by traffic; or

(b) The asphaltic concrete, temporary or otherwise, will be subject to traffic for more than 60 days.

The gradation will be determined in accordance with AASHTO T 11 and AASHTO 27, and shall conform to the requirements given below.

Mix Design Grading Limits						
Sieve Size	Percent Passing					
	Lift Thickness Less Than 1½ Inches		Lift Thickness 1½ to 2 Inches		Lift Thickness Greater Than 2 Inches	
	Without Admixture	With Admixture	Without Admixture	With Admixture	Without Admixture	With Admixture
1 Inch					100	100

3/4 Inch			100	100	90-100	90-100
1/2 Inch	100	100	90-100	90-100	---	---
3/8 Inch	90-100	90-100	70-85	70-85	70-85	70-85
No. 8	41-55	42-56	41-51	42-52	41-51	42-52
No. 40	9-19	10-20	---	---	---	---
No. 200	2.0-5.0	3.0-6.5	2.0-5.0	3.0-6.5	2.0-5.0	3.0-6.5

409-2.02 Bituminous Material:

Asphalt cement shall be a performance grade (PG) asphalt binder, conforming to the requirements of Section 1005 of the specifications. The type of asphalt binder shall be PG 70-10.

The percent of asphalt cement used shall be based on the weight of total mix (asphalt cement, mineral aggregate, and mineral admixture).

The contractor shall provide the laboratory mixing and compaction temperature ranges to the mix design laboratory for each PG asphalt binder used for mix design purposes. The laboratory mixing temperature range is defined as the range of temperatures where the un-aged asphalt binder has a rotational viscosity of 0.17 ± 0.02 Pascal-seconds, measured in accordance with AASHTO T 316. The laboratory compaction temperature range is defined as the range of temperatures where the un-aged asphalt binder has a rotational viscosity of 0.28 ± 0.03 Pascal-seconds, measured in accordance with AASHTO T 316. The testing required in AASHTO T 316 shall be performed at 275 degrees F and 350 degrees F, and a viscosity-temperature curve developed in accordance with ASTM D2493. The viscosity-temperature curve shall be included in the mix design report. For PG asphalt binders that have a maximum laboratory mixing temperature exceeding 325 degrees F or a maximum laboratory compaction temperature exceeding 300 degrees F, the laboratory mixing and compaction temperature ranges shall be specified in writing by the asphalt binder supplier. The laboratory mixing and compaction temperature ranges, as well as the actual laboratory mixing and compaction temperatures used, shall be reported on the mix design. The contractor shall ensure that the asphalt binder supplier information required in this paragraph is provided to all appropriate parties in a timely manner, and that copies are included in the mix design report. The laboratory mixing and compaction temperatures are for mix design purposes only. Field mixing and compaction temperatures are specified in Subsection 409-3 of the specifications.

409-2.03 Mineral Admixture:

Mineral admixture shall be either Portland cement, blended hydraulic cement, or hydrated lime conforming to the following requirements:

Material	Requirement
Portland Cement, Type I or II	ASTM C150
Blended Hydraulic Cement, Type IP or 1L	ASTM C595
Hydrated Lime	ASTM C1097

The mineral admixture content shall be 2.0 percent, by weight, of the mineral aggregate. However, a minimum of 1.0 percent mineral admixture may be used if the contractor submits test information showing a lowered percentage of mineral admixture produces mix design results for Index of Retained Strength of at least 60 percent and a Minimum Wet Strength of 150 pounds per square inch when tested in accordance with Arizona Test Method 802.

The certification and acceptance of Portland cement, blended hydraulic cement, and hydrated lime shall be in accordance with ADOT Materials Practice and Procedure Directive No. 13, "Certification and Acceptance of Hydraulic Cement, Fly Ash, Natural Pozzolan, Silica Fume, and Lime".

409-2.04 Mix Design:

Utilizing mineral aggregate which has been crushed, processed, separated, and stockpiled, a mix design shall be formulated and submitted by the contractor to the Engineer. The mineral aggregate samples used for mix design purposes shall be representative of aggregate materials to be used during production.

The mix design shall be based on the mix design criteria and other requirements specified herein, utilizing asphalt cement and mineral admixture of the type and from the sources proposed for use in the production of asphaltic concrete.

Mix designs shall be developed utilizing a minimum ratio of three (3) for the lift thickness to nominal maximum aggregate size. The mix design shall be prepared by or under the direct supervision of a professional engineer experienced in the development of mix designs and mix design testing. Reclaimed asphalt pavement (RAP) may be used in the mixture if properly designed per Arizona Test Method 833. Limits for the usage of RAP shall be per ADOT Materials Practice and Procedure Directive No. 20, "Guidance on the Use of Reclaimed Asphalt Pavement (RAP) in Asphaltic Concrete". The mix design engineer shall meet the requirements given in ADOT Materials Practice and Procedure Directive No. 4, "Asphaltic Concrete Mix Design Proposals and Submittals". The mix design shall be provided in a format that clearly indicates all the mix design requirements and shall be sealed, signed, and dated by the mix design engineer.

The mix design shall be prepared by a mix design laboratory that has met the requirements of ADOT Materials Practice and Procedure Directive No. 19, "ADOT System for the Evaluation of Testing Laboratories".

If approved by the Engineer, as an alternative to meeting the mix design requirements specified herein, a mix design meeting the requirements of the specifications for a

Section 416 Asphaltic Concrete (End Product) (1/2 inch Special Mix), Section 416 Asphaltic Concrete (End Product) (3/4 inch Special Mix), Section 417 Asphaltic Concrete (SHRP) (End Product) (1/2 inch Mix), or Section 417 Asphaltic Concrete (SHRP) (End Product) (3/4 inch Mix) may be substituted for use. The type of asphalt binder used in the alternative mix design must be the same as that specified in Subsection 409-2.02 of the specifications. The alternative mix design may include reclaimed asphalt pavement (RAP) if properly designed per Arizona Test Method 833. If a mix design meeting the requirements of Section 417 is used, the number of gyrations for N-design used in the alternative mix design must be at least that which would be specified at the location where the Asphaltic Concrete (Miscellaneous Structural-Special Mix) is to be placed. The lift thickness for the alternative mix design shall conform to the following table.

Alternative Mix Design	Minimum Lift Thickness
Section 416 (1/2 Inch Special Mix)	1-1/2 Inches
Section 416 (3/4 inch Special Mix)	2 inches
Section 417 (1/2 inch Mix)	2 inches
Section 417 (3/4 inch Mix)	2-1/2 inches

The contractor may propose the use of a mix design that has been developed for a previous project. The proposed mix design shall meet the requirements of these specifications. The contractor shall provide evidence that the type and source of bituminous material, the type of mineral admixture, and the source and methods of producing mineral aggregate, and RAP material if applicable, have not changed since the formulation of the previous mix design. The contractor shall also provide current test results for all specified characteristics of the mineral aggregate, and RAP material if applicable, proposed for use. The Engineer will determine if the previously used mix design is suitable for the intended use and if the previous use of the mix design was satisfactory to the Department. The Engineer will either approve or disapprove the proposed mix design. Should the Engineer disapprove the use of the previously used mix design, the contractor shall prepare and submit a new mix design proposal in accordance with the requirements of these specifications.

A previously used mix design older than two years from the date it was formulated, sealed, signed, and dated shall not be allowed for use. Once approved for use on a project, a previously used mix design may be used for the duration of that project.

Test results used in the formulation of the mix design must be from testing performed no earlier than 45 days prior to the date the mix design is signed by the mix design engineer. Historical abrasion values may be supplied on sources provided the testing was conducted within the past two years.

The mix design shall be submitted to the Engineer under a cover letter signed by an authorized representative of the contractor.

The mix design shall be submitted to the Engineer for review a minimum of five working days prior to the start of production.

The mix design shall meet the following criteria when tested in accordance with the requirements of the following test methods:

Criteria	Requirement	Arizona Test Method
1.Voids in Mineral Aggregate: %, Range	14.5 - 18.5	(See Note 1)
2.Effective Voids: %, Range	3.8 - 4.2	(See Note 1)
3. Absorbed Asphalt: %, Range	0 - 1.0	(See Note 1)
Note: (7) For mixes without RAP, Arizona Test Method 815. For mixes with RAP, Arizona Test Method 833.		

The Engineer reserves the right to adjust the asphalt content during production from the mix design value without additional compensation to the contractor in order to obtain desirable effective voids.

409-2.05 Sampling and Testing:

Sampling and testing the materials and mixture for quality control purposes shall be the contractor's responsibility. The contractor shall perform sufficient testing to assure that mineral aggregate and asphaltic concrete are produced which meet all specified requirements. The Engineer reserves the right to sample and test the materials and mixture when necessary to determine that they reasonably conform to the requirements specified herein.

409-3 Construction Requirements:

409-3.01 General:

All courses of asphaltic concrete shall be compacted as required, smooth and true to the required lines, grades, and dimensions.

- (A) The surface of the final lift of asphaltic concrete placed under this section of the specifications shall be tested and shall not vary by more than 1/8 inch from the lower edge of a 10-foot straightedge when it is placed in the longitudinal direction (including across transverse joints), and when it is placed in the transverse direction across longitudinal joints;
- (B) The surface of any lift of asphaltic concrete placed under this section of the specifications, other than the final lift, shall be tested and shall not vary by more than 1/4 inch from the lower edge of a 10-foot straightedge when it is placed in the longitudinal direction (including across transverse joints), and when it is placed in the transverse direction across longitudinal joints; and

(C) All deviations exceeding the specified tolerances above shall be corrected by the contractor, to the satisfaction of the Engineer.

The asphaltic concrete hot plant shall conform to the requirements of Section 403 of the specifications.

No fine material which has been collected in the dust collection system shall be returned to the mixture unless the collected fines are accurately and uniformly metered into the mixture.

The temperature of asphaltic concrete or mineral aggregate upon discharge from the drier shall not exceed 325 degrees F, unless a higher temperature is recommended in writing by the asphalt binder supplier and approved by the Engineer.

The moisture content of the asphaltic concrete immediately behind the paver shall not exceed 0.5 percent. The moisture content will be determined in accordance with the requirements of AASHTO T 329.

Asphaltic concrete shall be placed only when the temperature of the surface on which the asphaltic concrete is to be placed is at least 65 degrees F.

At any time, the Engineer may require that the work cease or that the work day be reduced in the event that weather conditions, either existing or expected, are anticipated to have an adverse effect upon the asphaltic concrete.

All wheels and tires of compactors shall be wetted with water, or if necessary soapy water, or a release agent in order to prevent the sticking of asphaltic concrete. All other equipment surfaces shall be treated when necessary with a release agent. Only release agents evaluated through AASHTO Product Evaluation & Audit Solutions (formerly NTPEP) are acceptable for use. The results from AASHTO Product Evaluation & Audit Solutions (formerly NTPEP) testing, when tested in accordance with AASHTO T 383, shall conform to the requirements shown in the table below:

RELEASE AGENT TEST	REQUIREMENT
Asphalt Stripping Test Diluted Non-Diluted (Full Strength)	No Stripping No Stripping
Asphalt Performance Test	Less than or equal to 10.0% after the third cycle

Release agents which degrade, dissolve, or in any way damage the bituminous material shall not be used. Diesel fuel shall not be used as a release agent.

Asphaltic concrete immediately behind the laydown machine shall be in a thoroughly mixed, free-flowing, and workable condition, be free of lumps and crusts, and have a minimum temperature of 275 degrees F.

All courses of asphaltic concrete shall be placed and finished by means of self-propelled paving machines except under certain conditions or at certain locations where the Engineer deems the use of self-propelled paving machines impractical.

The speed of the paving machine shall be coordinated with the production of the plant and an adequate number of trucks for hauling asphaltic concrete shall be available in order to achieve, as far as practical, a continuous operation.

Self-propelled paving machines shall spread the mixture within the specified tolerances, without segregation or tearing, true to the line, grade, and crown indicated on the project plans. Pavers shall be equipped with hoppers and augers which will distribute the mixture uniformly in front of adjustable screeds.

Pavers shall be equipped with a screed for the full width being paved, heated if necessary, and capable of spreading and finishing all courses of asphaltic concrete.

Pavers shall be equipped with automatic screed controls with sensors for either or both sides of the paver, capable of sensing grade from an outside reference line, sensing the transverse slope of the screed, and providing the automatic signals which operate the screed to maintain the desired grade and transverse slope.

Failure of the control system to function properly shall be cause for the suspension of the placing of asphaltic concrete.

The base or subgrade upon which asphaltic concrete is to be placed shall be prepared and maintained in a firm condition until asphaltic concrete is placed. It shall not be frozen or excessively wet.

Before asphaltic concrete is placed, the surface to be paved shall be cleaned of all objectionable material and tacked with bituminous material in accordance with the requirements of Section 404 of the specifications.

Longitudinal joints of each course shall be staggered a minimum of 1 foot with relation to the longitudinal joint of any immediate underlying course. Longitudinal joints shall be located within 1 foot of the center of a lane or within 1 foot of the centerline between two adjacent lanes.

The contractor shall schedule its paving operations to minimize exposed longitudinal edges. Unless otherwise approved by the Engineer, the contractor shall limit the placement of asphaltic concrete courses, in advance of adjacent courses, to one shift of asphaltic concrete production. The contractor shall schedule its paving operations in such a manner to eliminate exposed longitudinal edges over weekends or holidays.

409-3.02 Compaction:

Compaction shall consist of an established sequence of coverage using specified types of compactors. A pass shall be defined as one movement of a compactor in either

direction. Coverage shall be the number of passes as are necessary to cover the entire width being paved.

The rolling sequence, the type of compactor to be used and the number of coverages required shall be as follows:

Rolling Sequence	Type of Compactor		No. of Coverages	
	Option No. 1	Option No. 2	Option No. 1	Option No. 2
Initial	Static Steel	Vibrating Steel	1	1
Intermediate	Pneumatic Tired	Vibrating Steel	2 - 6*	2 - 4*
Finish	Static Steel	Static Steel	1 - 3	1 - 3
Note:				
* Based on the roller pattern which exhibits the best performance.				

The Engineer shall select the option for compaction and, when pneumatic-tired compactors are used, will designate the tire pressure.

Steel wheel compactors shall not be used in the vibratory mode for courses of 1 inch or less in nominal thickness nor when the temperature of the asphaltic concrete falls below 180 degrees F. Steel wheel compactors shall weigh not less than 8 tons.

Initial and intermediate compaction shall be completed before the temperature of the asphaltic concrete falls below 200 degrees F. All edges shall be rolled with a pneumatic tired compactor, or other methods approved by the Engineer, while the mixture is still hot.

Compaction will be deemed to be acceptable on the condition that the asphaltic concrete is compacted using the type of compactors specified, ballasted and operated as specified and with the number of coverages of the compactors as specified.

409-3.03 Acceptance:

Asphaltic concrete will be accepted complete in place, if, in the judgment of the Engineer, the asphaltic concrete reasonably conforms to the requirements specified herein. Asphaltic concrete that is not acceptable and is rejected shall be replaced to the satisfaction of the Engineer and at no expense to the Department.

409-4 Method of Measurement:

Asphaltic concrete will be measured by the ton for the mixture actually used, which will include the weight of mineral aggregate, bituminous material, and mineral admixture. Measurement will include any weight used in construction of intersections, turnouts, curbs, spillways and spillway inlets, ditches, catch basin entrances, median strips, sidewalks, or other miscellaneous items or surfaces.

409-5 Basis of Payment:

409-5.01 General:

The accepted quantities of asphaltic concrete, measured as provided above, will be paid for at the contract unit price per ton for the bituminous mixture complete in place.

No direct payment will be made for the bituminous material and mineral admixture in the asphaltic concrete, or the bituminous material for tack coat and application of tack coat, the price being considered as included in the price paid for asphaltic concrete.

Asphaltic concrete may be measured, by volume, upon the execution of a supplemental agreement which will specify the manner in which the volume is determined. The volume will include the volume of mineral aggregate, bituminous material, mineral admixture, and any necessary blending material.

409-5.02 Reduction for Noncompliance:

A reduction in payment to the contractor for asphaltic concrete will be made for quantities of asphalt cement (bituminous material) that do not meet the requirements of Section 1005 as determined by corresponding test results. Adjustments in payment will be made in accordance with the requirements of Table 1005-1.

(608 PANEL, 06/19/25)

SECTION 608 SIGN PANELS:

608-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing and installing sign panels in accordance with the details shown on the plans and the requirements set forth herein.

The sign panels shall be of the following types:

- (A) Extruded Aluminum Sign Panels with Direct-Applied, or Demountable Characters;
- (B) Flat Sheet Aluminum Sign Panels with Direct-Applied, Electronic-Cut, or Screen-Printed Characters;
- (C) Warning, Marker, and Regulatory Sign Panels;
- (D) Route Shields for Installation on Sign Panels; and/or
- (E) EXIT ONLY Panels for Installation on Sign Panels.

608-2.02 Extruded Aluminum Sign Panels with Direct-Applied, Digitally-Imaged, or Demountable Characters: the title and the third paragraph of the Standard Specifications are revised to read:

608-2.02 Extruded Aluminum Sign Panels with Direct-Applied or Demountable Characters:

The letters, numerals, symbols, borders and other features of the sign message shall be direct-applied, or demountable, and shall conform to the requirements of Subsection 608-2.08 or Subsection 608-2.09 of the specifications.

608-2.03 Flat Sheet Aluminum Sign Panels with Direct-Applied, Digitally Imaged, Electric-Cut or Screen-Printed Characters: the title and the fifth paragraph of the Standard Specifications are revised to read:

608-2.03 Flat Sheet Aluminum Sign Panels with Direct-Applied, Electronic-Cut, or Screen-Printed Characters:

Messages shall be reflectorized white or, if called for on the plans, opaque black, and shall be produced by either screen printing, direct-applying, or electronic cutting, as specified under Subsections 608-2.09 of the specifications.

608-2.05 Route Shields (For Installation on Sign Panels): The first paragraph of the Standard Specifications is revised to read:

Route shields may be demountable or direct-applied.

608-2.06 EXIT ONLY Panels (For Installation on Sign Panels): the first paragraph of the Standard Specifications is revised to read:

EXIT ONLY panels may be demountable or direct-applied. Demountable EXIT ONLY panels shall be attached to the sign panel with self-plugging aluminum blind rivets.

608-2.10 Digitally-Imaged Characters: the title and the text of the Standard Specifications are revised to read:

608-2.10 Digital Printing of Signs:

Digital printing of signs shall utilize a matched component system, including appropriate software and drivers in accordance with an APL certified retroreflective sheeting manufacturer's warranty requirements. Finished signs shall consist of a UV-protective clear overlay applied to the entire face of the sign. Any overlays shall also be compatible with the retroreflective sheeting manufacturer's matched component system and warranty. Digitally printed signs shall conform to the requirements of ASTM D4956 for daytime and nighttime requirements, as well as the requirements of the

Department's Traffic Engineering Guidelines and Processes (TGP) 380 and Section 1007 of the specifications.

ITEM 6080110 - REMOVE AND REINSTALL SIGN:

Description:

The work under Remove and Reinstall Sign shall consist of removing sign panel assemblies, posts and foundations, salvaging sign panels, and reinstalling salvaged panel assemblies on new posts and foundations as identified in the project plans and as described herein.

Construction Requirements:

The relocation and reinstallation of the sign panel assemblies shall be in accordance with Section 608 of the specifications.

The contractor shall replace any sign panels that are damaged due to negligence by the contractor during removal, handling and transportation of those materials at no additional cost to the Department. The contractor shall not be held responsible for repairing or replacing any signs that were damaged prior to construction provided that the contractor identifies them to the Engineer prior to the start of construction operations. If the Engineer determines that a new sign panel is needed through no fault of the contractor, it will be measured and paid under the respective contract items. Sign mounting hardware shall be weatherproof.

Existing posts and foundations shall be removed in accordance with Subsection 202-3 of the specifications.

Method of Measurement:

Remove and Reinstall Sign will be measured by the unit for each sign assembly.

Basis of Payment:

The accepted quantities of Remove and Reinstall Sign, 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 the new posts and foundations.

(610PNT, 8/21/25)

SECTION 610 PAINTING:

610-3.02 (A)(2) Steam Cleaning: the first paragraph of the Standard Specifications is revised to read:

All dirt, grease, loose chalky paint, and other foreign material which has accumulated on previously painted surfaces shall be removed with a steam cleaning apparatus prior to all other phases of cleaning. It is not intended that sound paint be removed by this process. After steam cleaning, any paint which has become loose, curled, lifted, or loses its bond to the preceding coat or coats shall be removed to sound paint or metal surface by the contractor at no additional cost to the Department.

610-3.02 (A)(3) Hand Cleaning: of the Standard Specification is revised to read:

Manual or powered wire brushes, hand scraping tools, power grinders, or sandpaper shall be used to remove all dirt, loose rust, mill scale, and paint which is not firmly bonded to the surfaces.

610-3.05 (A)(1) General: the second paragraph of the Standard Specifications is revised to read:

All paints used shall be appropriately chosen from among the types described in Subsection 1002-2 of the specifications and shall conform to the requirements given therein.

610-3.05 (B) Concrete Surfaces: the first paragraph of the Standard Specifications is revised to read:

When painting is specified on the plans or in the special provisions, paint conforming to the requirements of Subsection 1002-2.03 of the specifications, shall be applied to the exposed concrete surfaces tabulated below, except that sidewalks, appurtenant curbs, downdrains, and bridge deck surfaces shall be excluded.

ITEM 6110200 – METAL HANDRAIL (PAG STD DTL 105) (STANDARD LOWER RAIL LOCATION):

Description:

Metal Handrail (PAG Std Dtl 105) (Standard Lower Rail Location) shall consist of constructing the metal handrail with connections at the locations shown in the project plans and in accordance with PAG Std Dtl 105 of the project plans and these specifications.

Materials:

Railing materials shall conform to the requirements as specified in the project plans.

Concrete shall conform to the requirements of Section 922 of the specifications

All portions of the handrail and connections shall be given a three-paint coating system per Section 1002-2.01 of the specifications. Paint color shall be gray.

Construction Requirements:

Welding shall be performed in accordance with the requirements of the current edition of the American Welding Society, Structural Welding Code, D1.1. All butt welds on exposed surfaces shall be ground flush with adjacent surfaces.

The contractor shall submit shop drawings in accordance with Subsection 105.03 of the specifications, showing complete details.

The contractor shall furnish complete copies, in triplicate, of all mill reports on steel materials.

Certificate of Compliance shall be submitted to the Engineer in accordance with the requirements of Subsection 106.05 of the Standard Specifications.

The railing shall be carefully erected, true to line and grade. Posts shall be vertical and parallel with the deviation from the vertical for the full height of the panel not exceeding 1/8 inch.

All exposed metal surfaces shall be painted per Section 610 of the specifications. After erecting the railing, any damage or abrasion to painted surfaces or exposed steel shall be repaired in accordance with Section 610 of the specifications.

Method of Measurement:

Metal handrail will be measured by the linear foot along the top of the completed handrail from outside to outside of end posts.

Basis of Payment:

The accepted quantities of metal handrail, 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.

(708 PTVCT, 07/17/25)

SECTION 708 WATERBORNE PAVEMENT MARKINGS:

708-2.01(D) Quantitative Requirements of Mixed Paints: the viscosity row of the Table 708-1 of the Standard Specifications is revised to read:

Table 708-1		
	White	Yellow
Viscosity: Krebs Units at $77 \pm 1^\circ$ F, ASTM D562	70 - 95	70 - 95

SECTION 803 - LANDSCAPE PLATING MATERIALS:

803-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing, placing, and compacting imported materials for plating embankment slopes, unpaved disturbed construction ground/soil surface and other designated areas, which shall include all excavation and backfilling; eradicating existing grasses and weeds with application(s) of an approved herbicide, and by mechanical methods; furnishing and applying herbicide mixed in water, which is placed on the cleared ground and on the granite mulch and rock mulch; grading surfaces upon which imported material shall be placed, to ensure proper drainage and maintaining areas free of weeds and trash/debris during construction all in accordance with these specifications.

803-2.02 Decomposed Granite and Granite Mulch: of the Standard Specifications is modified to add:

The contractor shall not impair air and stormwater quality through selecting and installing rock materials to maximum extent practicable (MEP). Sedimentary rocks and/or rock materials that will naturally generate excessive fine particles beyond the specified amount as shown in the gradation requirements below shall not be allowed.

Granite mulch shall be Apache Brown in color. It is desired to have the Granite mulch for this project match the granite mulch color from the Ajo Traffic Interchange as closely as possible.

Granite mulch to be placed at the designated locations shown on the project plans and/or in these Special Provisions. Granite mulch shall be approved for color and gradation requirements before placement. The color to be used on the project shall be approved by ADOT Roadside Development through the Engineer prior to any processing or placement.

Contractor shall provide a 0.25-ton material sample spread over an area 2-inches deep for review. Criteria to be used for approval for project granite color(s) will be based on the following: similarity to the existing granite color for this highway section and the material's appearance after being wet and then dried.

Gradation requirements for the 1-1/4 inch granite mulch are as follows:

<u>Passing Sieve</u>	<u>Percent</u>
1¼ inch	100
¾ inch	60-80
½ inch	45-65
No. 40	5 -20

803-3 Construction Requirements: of the Standard Specifications is modified to add:

The contractor shall receive approval from the Engineer for granite mulch color before installation.

Granite mulch to be used on the project must meet the following additional requirements, in addition to providing documentation from the contractor to the Engineer:

Copy of Environmental Permit for granite mulch pit.

Written acknowledgement from the granite mulch supplier that the material can be provided with the quantity of granite mulch needed for the project.

Written acknowledgement that granite mulch supplier material will be provided within the contract construction time frame.

Granite mulch to be placed shall be spread and leveled on jobsite away from any traffic recovery areas.

Labeling of granite mulch shall first list on line one the name of the product, and on the second line shall appear the name of supplier. Text for labeling shall be waterproof, clearly legible, printed, and 1-inch capitalized text.

All granite mulch samples provided shall be clean and washed, leveled covering an approximate spread area of 5-feet X 5-feet, and signed identifying the product and source.

Remove all non-planted vegetation from all areas designated to receive granite mulch (by chemical or mechanical means) and maintain the designated areas "vegetation-free" prior to placement of the granite mulch, or as specified by the Engineer.

Prior to placement of the granite mulch, designated areas to receive granite mulch shall be made completely free of all grass, weeds, or other miscellaneous vegetation growth and have an approved herbicide applied. The herbicide shall be followed by an application of water for activation.

When using herbicides, the contractor shall comply with all applicable portions of Subsection 803-3.02 of the Standard Specifications. All dead vegetation (grass and weeds) shall be removed and properly disposed of. The contractor shall be responsible for all erosion repairs on project site that may occur during granite mulch color review and approval process at no additional expense to the Department.

803-3.02 Decomposed Granite and Granite Mulch: of the Standard Specifications is modified to add:

The sub-grade upon which the granite mulch shall be placed, shall be graded and compacted to promote proper drainage, as approved by the Engineer. The sub-grade shall be compacted to between 85 to 90-percent of the maximum proctor density, as determined in accordance with the requirements of Arizona Test Methods 230 or 235, depending on the test method used to determine the compaction density (Sand Cone or Nuclear Method).

All vehicles used for spreading, grading and raking the granite mulch shall have one set of wheels with floatation tires having a minimum width of 18-inches to allow equal compaction of the granite mulch and decomposed granite.

Granite mulch shall be placed to a depth of 2-inches. After rough spreading and rough grading of the granite mulch within the designated areas, the granite mulch shall be raked evenly and thoroughly to blend the different gradation sizes.

The use of conveyor belt type equipment for placing granite mulch shall not relieve the contractor from the requirements of compacting the granite much.

After placement, the granite mulch shall be saturated with water to an optimum moisture level as recommended by the supplier. The Engineer will approve the amount of water necessary to aid in the compaction of the granite mulch, prior to application.

During the final spreading and final grading operations, all surfaces within the granite mulch areas shall be passed over by the spreading and grading equipment a minimum of 2-times.

Equipment operations for spreading, grading, raking, chemical application, water settling, and any other operations shall be done in a manner that uniformly maximizes the vehicle(s) wheel compaction over the surface area.

The pre-emergent herbicide shall be utilized in the manner recommended by the manufacturer to prevent germination of weeds/undesirable plant species, and shall be Gallery, Pendulum AquaCap, Surflan, Dimension, or an approved equal, and shall be applied at a rate based on product information/data for best control effects. Pre-emergent herbicide shall also be employed to the designated decomposed granite and granite mulch area, prior to the final water settling operation. Selection of pre-emergent herbicide products shall be based on the type of weeds or undesirable plant species to be treated as evaluated by a Construction Professional Landscape Architect and approved by the Engineer. The first application of pre-emergent herbicide and each subsequent application shall be from different products to optimize the lasting result of designated decomposed granite and granite mulch area.

After placing, spreading and grading the granite mulch, the contractor shall water settle the total thickness of the granite mulch, to remove the fine material from the surface. The water settling operation, noted above, shall be completed by applying water at minimum depth of 1/2-inch over the granite mulch placed or as approved by the Engineer.

803-4 Method of Measurement: the first paragraph of the Standard Specifications is revised to read:

Granite Mulch and Rock Mulch will be measured by the square yard of material in place at the specified thickness. The quantity shown in the Bid Schedule will be used for payment of Item 8030092 - Granite Mulch (1-1/4 Inch Minus) unless both the contractor and the Engineer mutually agree that a variation of more than 10 percent of this quantity exists. If a variation exists, the Engineer will determine the variation based on the project plans and evidence provided by the contractor. Acceptable form of evidence can be construction survey – such as making field measurements for verification as approved by the Engineer.

803-5 Basis of Payment: of the Standard Specifications is modified to add:

Payment for the accepted quantities of Item 8030092 - Granite Mulch (1-1/4 Inch Minus) measured as provided above will be made at the contract unit price per square yard, which price shall be full compensation for the work complete in place.

There shall be no separate measurement or direct payment for required or requested samples, grading, compaction, or pre-emergent herbicide. The cost for this work is included in the cost of the contract items.

ITEM 8050003 — SEEDING (CLASS II):

The work under this item shall consist of furnishing all materials, preparing the soil, applying Class II seed, establishing, and maintaining the seeded areas along with final mulch cover.

Areas to be seeded are those disturbed or unvegetated areas listed herein, shown on the plans, called for in the contractor's erosion/sediment control plan, Nonpoint Source (NPS) pollution control plan, Stormwater Quality Protection Plan (SQPP), Stormwater Runoff Pollution Control Plan, Decentralized Stormwater Management Plan, Stormwater Runoff Mitigation Plan, Stormwater Management Plan (SWMP), Biotechnical Erosion Control Plan, Post-Construction Stormwater Management Plan (PCSMP), Integrated Vegetation Management Plan (IVMP), Functional Landscape Ecological Restoration Plan, Assisted Migration Plan (AMP), or designated by the Engineer. All construction support activities disturbed unpaved temporary construction access, unpaved on-site staging, unpaved on-site material storage, and unpaved on-site stockpiling areas shall ultimately be seeded unless otherwise stabilized by equivalent permanent stabilization measures. If not seeded, the equivalent permanent stabilization measures shall be evaluated by a Construction Professional Landscape Architect (PLA) and approved by the Engineer. Unless otherwise prohibited by environmental permit, seeding is required to stabilize the unpaved disturbed dry area within the Waters of the U.S. Seeding area below the Ordinary High-Water Mark (OHWM) shall exclude any definable low flow channel(s). The seeding area below the OHWM shall also exclude the area directly under bridge(s).

Seeding may be included as part of a landscape project as specified in Section 807 or used for erosion control as part of a Storm Water Pollution Prevention Plan (SWPPP) as specified in Subsection 104.09 of the specifications, or both.

In either case, seeding shall be accomplished in two (2) stages. The first stage shall consist of tillage; furnishing and applying compost, chemical fertilizer, and sulfur; furnishing and planting the contract-specified seed mix; and furnishing, applying, and affixing final mulch cover. The second stage, beginning after the first stage has been accepted by the Engineer, shall be a 45-calendar-day period during which time the

contractor shall be responsible for maintaining and stabilizing the seeded and mulched areas, and restoring damaged or eroded areas.

Seeding construction shall be completed before Substantial Completion. The 45-calendar-day seeding maintenance period, including any re-seeding work if required after Initial Seeding Construction Acceptance, shall be completed before project Final Acceptance.

Seeding used as part of a SWPPP shall be completed before Substantial Completion, or sooner as required in the SWPPP. The 45-calendar-day seeding maintenance period, including any re-seeding work if required after Initial Seeding Construction Acceptance, shall be completed before project Final Acceptance.

No time extension will be granted for seeding not completed as specified herein.

Seeding areas below the OHWM shall be exempted from the 45-calendar-day maintenance period requirement.

An on-site pre-activity seeding construction meeting shall be coordinated by Construction PLA. The necessity of half-acre (0.5 acre) sample demonstrative area of Class II Seeding shall be verified for the seeded areas greater than five (> 5) acres excluding shoulder build-up areas (edge of pavement build-up areas). The contractor shall guarantee in writing to furnish all suitable equipment for soil tillage, seeding, and mulching during pre-activity seeding construction meeting as evaluated by a Construction PLA, as well as approved by the Engineer.

2.0 Materials:

2.01 General:

The contractor shall avoid persistent herbicide residues contamination in the soil. Soil sterilant herbicides, especially bare-ground herbicides with long-lasting soil persistence, shall be prohibited for use in all unpaved project areas that will be seeded. Pre-emergence herbicides shall be prohibited from unpaved project areas that will eventually be seeded.

Appropriate documentation, as specified below, shall be submitted to the Engineer a minimum of 30 calendar days before the start of a scheduled seeding activity. No materials shall be delivered to the site until the documentation has been approved by the Engineer.

Unless otherwise specified, Certificates of Compliance conforming to the requirements of Subsection 106.05 of the specifications shall be provided for all materials.

The contractor shall also provide tests from accredited laboratories for all materials, as specified herein. Should the contractor perform its own testing, such test results shall also be provided to the Engineer.

2.02 Seed:

(A) General Requirements:

The species, variety, and strain of seed (designated elsewhere herein as contract-specified seed) shall be as shown on the plans or as specified herein. The contract-specified seed shall be obtained from seed suppliers through harvesting of wildland collections, or field-grown seeds grown prior to or during the contract period.

A Certificate of Analysis for each seed species shall be furnished to the Engineer at least four (4) weeks prior to the seeding construction. No seed shall be furnished to, or delivered to, the project until approved by the Engineer and Roadside Development. The Certificates of Analysis shall contain the following information for each seed sample: the test results of the Fifty States Noxious Weed list, all seeds including weed seeds listed, purity and germination, tetrazolium test results, when used and any pathology found to be present. The sample testing, when available for the native plant species, shall use the rules for testing seeds published by the "Association of Official Seed Analysts" or the "Society of Commercial Seed Technologists."

If the samples indicate species listed as noxious, restricted, or invasive, the lot will be rejected or evaluated for use on the project. The list of noxious, restricted, or invasive species is located at Roadside Development and linked to the following website:

<http://www.azdot.gov/business/engineering-and-construction/roadway-engineering/roadside-development>

Within 30 calendar days after the award of contract, the contractor shall submit the name of the seeding subcontractor to be used, along with written confirmation from seed suppliers and/or collectors, on their letterhead, that the source(s) for the contract-specified seed has been secured. A minimum of three (3) separate confirmation letters from seed suppliers, providers, and/or collectors shall be presented through the Engineer for a Construction PLA's evaluation within the context of reliable sources. If any of the contract-specified seed is expected to be unavailable prior to the time specified for seeding, in accordance with Subsection 2.02(B) below, the contractor shall notify the Engineer at this same time.

The seed shall be delivered to the project site unmixed in standard, sealed, undamaged containers for each seed species. Each container shall be labeled in accordance with the appropriate provisions of the Arizona Revised Statutes and the U.S. Department of Agriculture rules and regulations under the Federal Seed Act. Labels shall indicate the scientific genus, species, subspecies/varieties or strains of seed, the percentage of germination, purity, weed content, and testing information. Unless otherwise approved by Roadside Development Section through the Engineer, the date of analysis for Tetrazolium Test (TZ) shall not be more than 15 months prior to the delivery date from a seed provider/supplier. A Certificate of Analysis from an accredited seed-testing laboratory, and conforming to Subsection 106.05 of the specifications, shall accompany each container of seed.

Unless otherwise approved by Roadside Development through the Engineer, weed content of the contract-specified seed mix shall not exceed 0.5 percent ($\leq 0.5\%$).

In addition to Federal Seed Act Regulations, unless otherwise approved by Roadside Development through the Engineer, the contamination of seed lots from the following noxious / invasive plant species shall not be permitted.

NOXIOUS / INVASIVE WEEDS WATCH LIST FOR THE CONTAMINATED SEED LOTS	
SCIENTIFIC NAME	COMMON NAME
<i>Amaranthus retroflexus</i>	Redroot Amaranth / Redroot Pigweed / Red-Rooted Pigweed / Rough Pigweed
<i>Bassia scoparia</i> (syn. <i>Kochia scoparia</i>)	Kochia / Fireweed
<i>Bothriochloa bladhii</i> (syn. <i>Andropogon bladhii</i> / <i>Andropogon caucasicus</i> / <i>Andropogon intermedius</i> / <i>Bothriochloa caucasica</i> / <i>Bothriochloa intermedia</i>)	Caucasian Bluestem
<i>Bothriochloa ischaemum</i>	Yellow Bluestem
<i>Brassica tournefortii</i>	Sahara Mustard / Mediterranean Mustard / Mediterranean Turnip / Prickly Turnip
<i>Bromus tectorum</i>	Cheatgrass / Downy Brome / Broncograss / Downy Chess / Soft Chess / Drooping Brome
<i>Cynodon dactylon</i> (syn. <i>Capriola dactylon</i>)	Bermudagrass / Devilgrass
<i>Centaurea melitensis</i>	Malta Star-thistle / Napa Star Thistle / Tocalote
<i>Cenchrus spinifex</i> (syn. <i>Cenchrus incertus</i> / <i>Cenchrus pauciflorus</i> / <i>Cenchrus parviceps</i>)	Field Sandbur / Coastal Sandbur / Common Sandbur
<i>Chorispora tenella</i>	Crossflower / Purple Mustard / Blue Mustard / Musk Mustard / Beanpodded Mustard / Tenella Mustard
<i>Cuscuta</i> spp.	Dodder / Angel Hair / Devil's Hair / Devil's Ringleet / Goldthread / Hairweed / Lady's Laces / Strangleweed / Witch's Hair / Amarbel
<i>Eragrostis lehmanniana</i>	Lehmann Lovegrass
<i>Euphorbia esula</i>	Leafy Spurge / Green Spurge / Wolf's Milk
<i>Euphorbia prostrata</i> (syn. <i>Chamaesyce prostrata</i> / <i>Euphorbia chamaesyce</i>)	Prostrate Spurge / Prostrate Sandmat / Ground Spurge / Blue Weed
<i>Onopordum acanthium</i>	Scotch Thistle / Cotton Thistle
<i>Pennisetum ciliare</i> (syn. <i>Cenchrus ciliaris</i>)	Buffelgrass / African Foxtail Grass
<i>Physalis</i> spp.	Ground Cherry / Jerusalem Cherry / Strawberry Tomato

NOXIOUS / INVASIVE WEEDS WATCH LIST FOR THE CONTAMINATED SEED LOTS	
SCIENTIFIC NAME	COMMON NAME
<i>Salsola kali</i> subsp. <i>tragus</i> (syn. <i>Salsola iberica</i>)	Russian Thistle / Tumbleweed
<i>Setaria faberi</i>	Japanese Bristlegrass / Giant Foxtail
<i>Setaria pumila</i> (syn. <i>Chaetochloa glauca</i> / <i>Chaetochloa lutescens</i> / <i>Panicum glaucum</i> / <i>Setaria glauca</i>)	Yellow Foxtail / Pigeon Grass / Yellow Bristlegrass
<i>Setaria viridis</i>	Green Bristlegrass / Pigeon Grass / Wild Millet / Green Foxtail
<i>Solanum physalifolium</i> (syn. <i>Solanum physalifolium</i> / <i>Solanum sarachoides</i> / <i>Solanum villosum</i>)	Hoe Nightshade / Argentine Nightshade / Green Nightshade / Hairy Nightshade

The contractor shall provide all seed tag labels to the Engineer. No payment will be made for seeds until tag labels and Certificates of Analysis from all seeds to be used on the project have been submitted as specified.

Both the contractor and the seed supplier shall store seed under dry conditions, at temperatures of between 35 °F and 120 °F, and out of direct sunlight. Prior to using the seed, the contractor, as well as seed supplier, shall both provide a certification letter to the Engineer verifying that the seed was stored as specified herein.

Legume seed shall be inoculated with appropriate bacteria cultures approved by the Engineer, in accordance with the culture manufacturer's instructions.

Tetrazolium staining shall be acceptable to test for germination and hard seed. Cut or fill testing will not be allowed. As directed by the Engineer, seeds with an expiration date past the acceptable test date or not meeting the specified conditions for storage shall be retested by the contractor. The Engineer may perform random sampling of seeds throughout the project. Mixing of the specified seed at the project site shall be under the supervision of the Engineer.

Application rates of seed as specified 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.

Diversified seed mix species and the PLS rates are shown in Table 1 below:

TABLE 1			
DIVERSIFIED SEED MIX—for All Unpaved Disturbed Areas, Unvegetated Areas, Receiving Pervious Areas (RPA), Decentralized Stormwater Management Areas, and/or Designated Areas			
Botanical Name	Common Name	PLS Rate (Pounds Per Acre)	Per Pound Value for Substitution (see text)
Aristida purpurea	Purple Threeawn	3	\$40
Abronia villosa	Sand Verbena	1	\$90
Bouteloua aristidoides	Needle Grama	0.2	\$20
Bothriochloa barbinodis	Cane Beardgrass	1	\$45
Bouteloua barbata	Sixweeks Grama	0.2	\$30
Baileya multiradiata	Desert Marigold	2	\$80
Calliandra eriophylla	Fairy Duster	2	\$100
Distichlis stricta (syn. Distichlis spicata)	Desert Saltgrass	1	\$60
Encelia farinosa	Incienso Brittlebush	4	\$35
Encelia frutescens	Button Brittlebush	1	\$30
Eschscholtzia mexicana	Mexican Poppy	1	\$40
Ephedra nevadensis	Nevada Mormon Tea	1	\$35
Gaillardia aristata	Blanket Flower	2	\$20
Hilaria berlanderi	Curly Mesquitegrass	2	\$45
Kallstroemia grandiflora	Arizona Poppy	0.5	\$90
Lesquerella gordonii	Gordon's Bladderpod	1	\$40
Lupinus sparsiflorus	Desert Lupine	1	\$90
Lupinus bicolor	Miniature Lupine	2	\$70
Lupinus succulentus	Arroyo Lupine	3	\$30
Nassella pulchra (syn. Stipa pulchra)	Purple Needlegrass	3	\$90
Oryzopsis hymenoides (syn. Achnatherum hymenoides)	Indian Ricegrass	3	\$15
Psilostrophe cooperi	Paper Flower	0.5	\$110
Plantago ovata	Desert Indian Wheat	2	\$5
Penstemon parryi	Parry's Beardtongue	2	\$80

Sphaeralcea ambigua	Desert Globemallow	1	\$55
Sporobolus airoides	Alkali Sacaton	0.5	\$26
Salvia columbariae	Desert Chia	1	\$55
Senna covesii	Desert Senna	4	\$50
Sporobolus cryptandrus	Sand Dropseed	0.2	\$10
Thamnosma montana	Desert Rue	0.5	\$100
Trifolium willdenovii	Tomcat Clover	0.5	\$90
Zinnia acerosa	Dwarf White Zinnia	1	\$150
Estimated Per Acre Subtotal Value for Seeds Only			\$ 2,575.00

(B) Seed Substitution:

No substitution of the contract-specified seed will be allowed unless evidence is submitted documenting that the contractor has made a diligent effort to obtain the contract-specified seed from either seed suppliers or collectors, and that the contract-specified seed will not become available prior to the time specified for seeding in the contractor's approved construction schedule.

The contractor may also request a substitution if the lowest price available for the contract-specified seed is greater than two (2.0) times the value shown in Table 1. The contractor shall provide documentation from a minimum of three (3) seed suppliers or collectors supporting such a request. Documentation shall include copies of the invoices from each supplier or collector. Only those invoices obtained within three (3) weeks of the time specified for seeding in the contractor's approved construction schedule will be acceptable.

Should a substitution of the contract-specified seed be requested for one of the two (2) reasons specified above, and the contractor's documentation is approved by the Engineer, the Department's Roadside Development Section will specify an alternate seed within five (5) working days of the Engineer's approval of the contractor's documentation. The alternate seed will only be allowed when there is an insufficient quantity of the contract-specified seed, as determined in the previous two (2) paragraphs, for the areas to be seeded as called for herein or as required for erosion control. The contractor shall obtain and apply the alternate seed, as required, to all such remaining areas. Unless otherwise approved by the Engineer, the approved alternate seed will only be allowed until such time that contract-specified seed meeting the availability and price requirements specified herein can be provided.

For each pound of contract-specified seed not provided by the contractor, the value indicated in Table 1 will be deducted from the contract amount. The price per pound for the alternate seed selected by the Department, as specified above, will be determined

in accordance with Subsection 109.04(D)(2) of the specifications. No additional adjustments will be made for substituting the alternate seed, the costs being considered as included in the contract item for seeding.

No payment will be made for areas seeded with unapproved seed. No payment will be made for areas seeded until the entire approved seed mix (including all authorized seed substitutions/adjustments) is executed.

2.03 Tacking Agent:

Tacking agent shall be a naturally occurring organic compound and shall be non-toxic. The tacking agent shall be a product typically used for binding soil and mulch in seeding or erosion control operations. Approved types shall consist of mucilage or gum by dry weight as active ingredient obtained from guar or plantago. The tacking agent shall be labeled indicating the type and mucilage purity.

The contractor shall have the tacking agent swell volume tested by an approved testing laboratory using the USP method. The standard swell volume shall be considered as 30 milliliters per gram. Material shall have a swell volume of at least 24 milliliters per gram. Certified laboratory test results for homogenous consistency shall be furnished to the Engineer for each shipment of tacking agent to be used on project areas. Tacking agent rates shall be adjusted to compensate for swell volume variation. Material tested with lesser swell volume shall have the tacking agent rate increased by the same percentage of decrease in swell volume from the standard 30 milliliters per gram. Material tested with greater volume may reduce tacking agent rates by the same percentage of increase in swell volume from the standard 30 milliliters per gram. Tacking agent shall be pure material without starches, bentonite, or other compounds that would alter the swell volume test results of mucilage, or the effectiveness of the tacking.

2.04 Thermally-Refined Wood Fiber:

Wood cellulose fiber mulch shall conform to the requirements of Subsection 805-2.03 of the Standard Specifications, except as modified herein, and shall be from thermo-mechanically processed wood, processed to contain no growth germination inhibiting factors. The mulch shall be from virgin wood, manufactured, and processed so the fibers will remain in uniform suspension in water under agitation to form homogenous slurry. Paper products will not be considered as virgin wood. The thermally-refined wood fiber mulch shall have the properties shown in Table 2 below:

TABLE 2	
Virgin Wood Cellulose Fiber	90% min.
Recycled Cellulose Fiber	10% max.
Ash Content	0.8% +/-0.3%
pH	4.5 +/-1.0
Water Holding Capacity	10 : 1 (water : fiber) Min.

2.05 Weed Free Straw Mulch:

(A) General:

Straw mulch including barley straw shall conform to the requirements of Subsection 805-2.03 of the Standard Specifications, except as modified herein, and shall be from the current season's crop. A letter of certification from the supplier shall be required stating that the straw was baled less than twelve (12) months from the delivery date. Additionally, a bill of sale for straw material shall be presented for a Construction PLA's evaluation within context from reliable sources through the Engineer.

All straw, including hydraulically applied straw, shall be free from noxious weeds in compliance with the standards and procedures of the North American Weed Management Association (NAWMA) or the Arizona Crop Improvement Association (ACIA). The contractor shall provide documentation, including a transit certificate, and appropriate labels and/or marking twine, from the ACIA or NAWMA that straw materials to be used for mulch are free of noxious weeds. The straw shall be accompanied by the certification, labels and/or marking twine at the time of delivery to the project site. Straw delivered to the project without such information will be rejected and promptly removed from the project.

Rye straw and oat straw will not be acceptable.

(B) Weed Free Straw Mulch for Hydraulic Application:

Hydraulically applied straw mulch shall be wheat, barley, or rice straw processed into various particle sizes, mixed with water and tacking material, and applied as a non-clogging slurry using a hydroseeder. A minimum of 70 percent (70%) of wheat, barley, or rice straw in the mix shall be not less than 1/2 inch $\pm$ 1/4 inch in length. Straw particles may be longer provided that the particles can be used with the selected hydroseeder without clogging. Hydraulically applied straw mulch, as furnished by the manufacturer, may contain up to ten (10) percent paper or cotton materials in dry weight. Hydraulically applied straw mulch shall also contain 20 percent (20%) of wood fiber in dry weight. The combined dry weight percentage of paper, cotton, and wood fiber materials together shall be not less than 15 percent (15%) nor more than 30 percent (30%) of the hydraulically applied straw mulch. The date of installation of hydraulically applied straw mulch cover shall be less than twelve (12) months from the date of production. The date of production of hydraulically applied straw mulch material shall be presented for a Construction PLA's verification through the Engineer. All hydraulically applied straw mulch material shall also meet the requirements of Subsection 805-2.05 (A) stated above.

2.06 Slow-release Chemical Fertilizer and Sulfur:

Chemical fertilizer shall conform to the requirements of Subsection 805-2.06 of the specifications and shall be the kind hereafter specified. Fertilizer shall be composed of a

mixture of one part sulfur-coated urea 25-4-8, one-part monoammonium phosphate 11-52-0-, and one-part methylene urea 38-0-0. The sulfur-coated urea, a blended fertilizer 25-4-8, shall have approximately 80 percent (80%) of the nitrogen defined as slow release, and contain five percent (5%) Iron, ten percent (10%) sulfur and trace amounts of zinc and manganese. The result shall be a 24-18-2 chemical blended fertilizer, as specified herein.

In addition to the fertilizer mixture, agricultural sulfur compounds, comprised of between 80 percent (80%) and 96 percent (96%) sulfur, shall be applied at the rate specified in Section 3.02. Chemical fertilizer and sulfur shall not be applied to the seeding area below the OHWM.

2.07 Water:

Water shall be free of oil, acid, salts, or other substances which are harmful to plants. All non-potable water shall be tested for its suitability for seeding/planting with the water quality-related concerns of salinity, pathogens, and contaminants. The water quality testing result shall be presented for a Construction PLA's evaluation through the Engineer. An Arizona Guide to Water Quality and Uses (web link: <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1610.pdf>) Figure 8, Water Quality and Uses Triangle shall be considered as reference for testing result evaluation and approval.

Water Quality Standards for seeding on construction projects that reach or exceed one-contiguous-acre (≥ 1 contiguous acre) permit threshold soil/ground disturbance defined under current Arizona Pollutant Discharge Elimination System (AZPDES) Construction General Permit (CGP) and/or National Pollutant Discharge Elimination System (NPDES) CGP:

- (A) On Arizona Non-Native Americans Land (**Non-Tribal**), water quality for seeding construction within 0.25-mile buffer zones of Impaired and/or Outstanding Arizona Waters (OAWs) shall meet the standards of current AZPDES CGP, as well as requirements of these Special Provisions.

The web link of ADEQ's eMaps within the State of Arizona:

<https://www.azdeq.gov/emaps>

- (B) Water quality for seeding construction within Arizona Native Americans Land (**Tribal**) shall meet the standards of EPA-established or approved Total Maximum Daily Loads (TMDLs) under current NPDES CGP, as well as requirements of these Special Provisions.

The web link of EPA-established or approved TMDLs within the State of Arizona:

<https://www.epa.gov/npdes/epas-stormwater-discharge-mapping-tools>

The source of water shall be approved by a Construction PLA through the Engineer prior to use.

2.08 Compost:

Compost in bulk or furnished in containers or bags, shall consist of composted organic vegetative materials, and may contain worm castings. No animal manures or city biosolids shall be used in the composting or added to the compost. Prior to being furnished on the project, compost samples shall be tested for the specified microbiological and nutrient conditions, including maturity and stability, by a testing laboratory approved for testing organic materials. During pre-activity seeding construction meeting, compost test written results submitted to the Engineer for approval shall be within nine (9) months from the date of the official lab test.

Compost material shall be dark brown in color with the parent material composted and no longer visible. The structure shall be a mixture of fine and medium size particles and humus crumbs. The maximum particle size shall be within the capacity of the contractor's equipment for application to the constructed slopes. The odor shall be that of rich humus with no ammonia or anaerobic odors.

Bulk Compost shall also meet the requirements of Table 3:

TABLE 3	
Cation Exchange Capacity (CEC)	Greater than 45 meq/100 g
Carbon : Nitrogen Ratio (C : N)	Less than 20 : 1
pH (of extract)	5.0 – 8.5
Organic Matter Content	Greater than 30%
Total Nitrogen (not added)	Greater than 1%
Micronutrients (added)	S, Ca, Mg, Na, Fe, Al, Mn, Cu, Zn, B
Maturity Index	Greater than 50% on Maturity Index at a 10 : 1 ratio
Stability Indicator, CO ₂ Evolution: Biologically Available C (BAC)	Less than 4mg CO ₂ -C/g OM/day is desirable. From 4 through 8mg CO ₂ -C/g OM/day is acceptable. Greater than 8mg CO ₂ -C/g OM/day is <u>not</u> acceptable.
The CEC lab testing method shall refer to EPA9081 at the web link: http://epa.gov/osw/hazard/testmethods/sw846/pdfs/9081.pdf	

Bulk compost is preferred and shall be applied to areas designated for seeding at the specified rate of 15 cubic yards per acre prior to final tillage for incorporation into the soil seedbed. Unless otherwise approved by the Engineer, bulk compost shall be engaged to all areas where equipment can be operated for final tillage in order to incorporate into

the soil seedbed. Bulk compost may be substituted with hydraulically applied compost for small sized projects that cover less than five (< 5) acres of Class II Seeding as evaluated by a Construction PLA, as well as approved by the Engineer.

The volume of bulk compost shall be measured and documented for Construction PLA's verification and approval through the Engineer.

In areas where bulk compost cannot be applied by broadcast methods, compost shall be applied hydraulically as per the approval of the Engineer. Hydraulically applied compost shall be applied at the rate of 5 cubic yards (or 135 cubic feet) per acre to mini-benched slopes or on other approved areas for incorporation into the soil seedbed. For seeding areas 3:1 and flatter where bulk compost cannot be employed, hydraulically applied compost shall be utilized at the rate of 5 cubic yards (or 135 cubic feet) per acre as per the approval of the Engineer. Hydraulically applied compost may also be combined with seed, soil amendments, and fertilizer in the same slurry prior to the final mulch cover with the approval of the Engineer.

The volume of hydraulically applied compost shall be measured and documented for Construction PLA's verification and approval through the Engineer.

Hydraulically applied compost shall meet the requirements of Table 4 below:

TABLE 4	
Cation Exchange Capacity (CEC)	Greater than 40 meq/100 g *
Carbon : Nitrogen Ratio (C : N)	Less than 20 : 1
pH (of extract)	5.0 – 8.5
Organic Matter Content	Greater than 35%
Total Nitrogen (not added)	Greater than 1%
Micronutrients (added)	S, Ca, Mg, Na, Fe, Al, Mn, Cu, Zn, B
Stability Indicator, CO ₂ Evolution: Biologically Available C (BAC)	Less than 4mg CO ₂ -C/g OM/day is desirable. From 4 through 8mg CO ₂ -C/g OM/day is acceptable. Greater than 8mg CO ₂ -C/g OM/day is <u>not</u> acceptable.
Moisture Content by Weight	From 15% through 25%
The CEC lab testing method shall refer to EPA9081 at the web link: http://epa.gov/osw/hazard/testmethods/sw846/pdfs/9081.pdf	

* When CEC is from 50 meq/100 g through 55 meq/100 g, in order to be approved, the contractor may add 100 pounds additional Hydraulically Applied Compost per acre to compensate for the lower-than-standard CEC value.

Compost shall not be applied to the seeding area below the OHWM. The choice between bulk compost and hydraulically applied compost shall be evaluated, as well as coordinated by a Construction PLA according to specific project conditions with the approval of the Engineer.

2.09 Soil Conditioners:

Soil conditioners, when required, will be as shown in the Special Provisions.

3.0 Construction Requirements:

3.01 General:

Seeding Operations:

At least two (2) weeks prior to beginning seeding, the contractor shall complete and submit a batch mix and seed application form to the Engineer for approval. The batch mix form will be supplied by the Engineer.

After acceptance of the form stated above, the Engineer and contractor in coordination with Construction PLA shall determine a half-acre (0.5 acre) sample demonstrative area to be seeded and mulched prior to applying seed to the remainder of the project. Both regular straw mulch and hydraulically applied straw mulch shall be applied to the sample demonstrative area, as determined during on-site pre-activity seeding construction meeting. Both straw mulches shall be representative of the materials proposed for use on the project. If the seeding and mulching procedures, as well as outcomes, are acceptable by Construction PLA, the contractor shall begin seeding operations as specified herein. Photographic Documentation of half-acre (0.5 acre) sample demonstrative seeded/mulched area shall be recorded and submitted to a Construction PLA, as comparative standard representation (mandatory visual reference) for Seeding Acceptance under Subsection 3.07 stated below.

The contractor shall notify the Engineer at least two (2) days prior to commencing any phase of seeding operations for the remainder of the project.

The equipment and methods used to distribute seeding materials shall provide an even and uniform application of seed, mulch, and other materials at the specified rates.

It is the contractor's responsibility to furnish all suitable equipment for soil tillage, seeding, and mulching at no additional cost to the Department.

Unless specified otherwise in the Special Provisions, seeding operations shall not be performed on undisturbed soil outside the clearing and grubbing limits of the project or on steep rock cuts.

The contractor shall coordinate the seeding operations with the grading operations to determine mobilization frequency as embankment and cut slopes are finished throughout the duration of the project. Seeding shall be done during suitable weather and soil conditions (soil–water and soil–temperature regimes) for tillage and placement of materials. Seeding operations shall not be performed below 35 degrees Fahrenheit (°F). Seeding operations shall not be performed when wind exceeds ten (10) miles per hour or, in the opinion of the Engineer, conditions would prevent uniform application of materials or would carry seeding materials into areas not designated for seeding. If wind exceeds ten (10) miles per hour, the seeding operation shall be evaluated by a Construction PLA and approved by the Engineer. If approved, the contractor shall perform seeding operation close to the ground surface with a hydro-seeding hose and hand-held hose-end sprayer nozzle or other equivalently effective seeding methods to guarantee all seeding materials are applied on the target area without being blown away by wind. The contractor is responsible for protecting ambient air and water quality during the seeding operation.

The contractor shall not expose an area greater than 750,000 square feet (≤ 17.22 acre) at any one location within the project limits until the seeding proposed for that portion of the project has been installed and accepted by the Engineer. Seeding shall be accomplished within 14 days after slopes and disturbed areas have been completed. Seeding operations shall comply with Subsection 104.09 and the applicable portions of Section 203 of the specifications, and as directed by the Engineer.

Frequent mobilizations may be required to accomplish seeding as specified herein. The Department will consider the cost of such multiple mobilizations to be included in the price bid for the seeding. No adjustments will be made to the contract for the number of seeding mobilization activities. Should the contractor fail to provide seeding for a sub-area as specified herein, the Engineer will immediately notify the contractor of such non-compliance. Should the contractor fail to immediately remedy the unstabilized area, the Engineer may suspend work until such seeding stabilization has been completed or proceed to provide the necessary seeding stabilization. The entire cost of such work will be deducted from the monies due or to become due to the contractor. In addition, no adjustment to the contract time will be made for suspensions resulting from the contractor's failure to provide seeding for a sub-area within the time periods specified herein.

3.02 Tillage:

Where equipment can operate, the area to be seeded shall be prepared with a ripper bar, chisel plow, or with other devices to provide thorough soil cultivation to the depth specified below. It is the contractor's responsibility to furnish all suitable equipment for soil tillage at no additional cost to the Department.

Where equipment is not suitable for operation, hand tillage and/or other manual methods shall be utilized as approved by the Engineer. Tillage depth shall follow the requirements specified herein in accordance with assessment/measurement from a Construction PLA, as well as acceptance by the Engineer.

For areas too steep to be prepared for seeding after the slope has been completed, as determined by the Engineer, tillage shall be accomplished with appropriate equipment as the slope is being constructed. On slope areas, all tillage shall be horizontal and parallel to the contours of the areas involved in order to create a roughened surface condition to reduce stormwater runoff velocity and volume. All seeding areas suitable for tillage shall be pre-tilled to promote on-site stormwater infiltration and alleviate stormwater surface runoffs, as a part of stormwater peak flow and Volume Reduction Approaches (VRAs). All seeding areas suitable for tillage shall be adequately pre-tilled to minimize pollutant loads anticipated in nonpoint source stormwater runoffs. All project areas eroded shall be restored to the specified condition, grade, and slope as directed prior to seeding.

Cut slopes shall be prepared with ridges and deep tillage or shall be mini-benched so as to detain rainwater/moisture close to its source. On fill slopes, the operations shall be conducted in such a manner as to form minor ridges thereon to assist in retarding runoff associated erosion/pollution and favor germination of the seed through detaining rainwater/moisture close to its source.

Except as specified herein, slopes shall be constructed in accordance with Subsection 203-3.03(B) of the specifications. Cut slopes flatter than 3:1 (horizontal to vertical) shall be tilled a minimum of 12 inches in depth, and fill slopes flatter than 3:1 shall be tilled to a six-inch minimum depth. All slopes steeper than 3:1, and areas which could potentially be affected by underground utilities, shall be tilled to a minimum six (6) inches in depth, and left in a roughened surface condition as they are constructed.

Track-walking or imprinting of rocky new fill slopes through mechanical methods in lieu of tillage may be allowable if accepted by a Construction PLA, through the Engineer. All final impression marks generated by track-walking or imprinting shall be horizontal and parallel to the contours of slope areas involved in order to create a roughened surface condition and reduce stormwater runoff velocity, enhance erosion/sediment control, as well as energy/velocity dissipation.

Tillage shall be a minimum of two (2) inches in depth for the first ten (10) feet from the toe of AC wedge including shoulder build-up areas (edge of pavement build-up areas) or from the outside edge of curb and gutter.

Care shall be taken during the seeding operations to prevent damage to existing trees and shrubs in the seeding area in accordance with the requirements of Subsection 107.11 of the specifications.

Tillage may require passing the equipment over the area several times to provide thorough soil cultivation. Furrows from the tillage shall be no more than 12 inches

apart. No work shall be done when the moisture content of the soil is unfavorable to tillage.

All competitive vegetation shall be uprooted prior to seeding and the soil shall be left in a friable roughened surface condition free of clods or large stones over four (4) inches in any dimension, and other foreign material that would interfere with the seeding operation. Exposed stones larger than four (4) inches shall be removed and disposed of in an approved manner prior to grading and seeding. Invasive and non-native weed species shall be eradicated according to the MISCELLANEOUS WORK (CONTROL OF NOXIOUS PLANTS) of these Special Provisions whenever applicable.

All disturbed soil areas covered with existing chipped wood materials and/or native plant residues, which will not interfere with the tillage operation, shall be tilled for incorporation into the soil along with chemical fertilizer, as well as soil amendments (sulfur and compost) prior to final tillage and seeding.

Regardless of the method of seeding application, all areas prepared with tilling shall have chemical fertilizer and soil amendments (sulfur and compost) uniformly applied and incorporated (disked) into the soil prior to final tillage and seeding.

Chemical fertilizer and sulfur shall be applied at the rate of 200 pounds each per acre. Bulk compost shall be applied at the rate of 15 cubic yards per acre.

Unless otherwise approved by the Engineer, bulk compost shall be applied using broadcast methods to all areas where equipment can be operated. For areas where bulk compost cannot be applied by broadcast methods, as evaluated by a Construction PLA and determined by the Engineer, compost shall be applied hydraulically at the rate specified in Section 2.08 above. Hydraulically applied compost shall not be combined with final mulch cover in the same slurry. However, seed, sulfur and fertilizer may be utilized together with hydraulically applied compost in the same slurry with the approval of the Engineer. Final mulch cover shall be installed on top of all seeded areas as a separate construction sub-phase.

Slopes 3:1 and flatter shall have fertilizer, sulfur, and compost tilled/disked into a minimum of the top four (4) inches of the surface. Slopes steeper than 3:1 shall have fertilizer, sulfur, and compost uniformly broadcast for incorporation into the soil as directed by the Engineer. Unless otherwise operated together with hydraulically applied compost for the approved locations, fertilizer and sulfur shall not be applied hydraulically to areas for seeding.

Tillage shall not be applied for the seeding area below the OHWM.

For mini-benched slopes, fertilizer, compost, and sulfur shall be applied at the specified rates with no tillage or incorporation.

Seeding shall not initiate until all tillage areas and/or mini-benched slopes are accomplished as approved by a Construction PLA through the Engineer.

3.03 Seeding:

(A) General:

Drill seeding with straw mulch shall be considered as the preferred method of seed application when practicable. Unless otherwise approved by the Engineer, drill seeding shall be used for all areas with slopes of 3:1 or less.

Hydroseeding shall be the alternative method for seed distribution for slopes in excess of 3:1, and where drill seeding is not practicable or suitable for soil conditions and seed types, as determined by the Engineer.

Seeds not suitable for drill seeding and hydroseeding methods shall be broadcast manually. Areas to be seeded manually shall be completed after the final soil tillage and prior to any drill or hydroseeding.

Regardless of the seeding method(s), the contractor is responsible to guarantee intimate seed-soil contact. Seed application on top of straw mulch cover or hydraulically applied straw mulch cover shall be rejected. To guarantee intimate seed-soil contact, seed application on top of existing exposed chipped wood materials and/or plant residues ground cover shall be rejected.

Final straw mulch cover or hydraulically applied straw mulch cover shall be applied on all seeded areas, as specified in Sections 3.04 and/or 3.05, within 24 hours of seed application. The seeding application shall be accomplished prior to installation of straw mulch cover or hydraulically applied straw mulch cover. Combining the seed application process with the mulching process will not be acceptable. By implementing Low Impact Development (LID) source-control measure, the contractor shall install a final straw mulch cover or hydraulically applied final straw mulch cover to minimize raindrop splash erosion and wind erosion/dust, as close as possible at the source of disturbance to protect all seeded areas. Thermally-refined wood fiber shall not be utilized solely as final mulch cover to protect all seeded areas. Seeds shall be neither exposed nor visible after the installation of straw mulch cover or hydraulically applied straw mulch cover.

Unless otherwise specified in the Special Provisions, Class II seeding areas shall not be watered after planting.

(B) Drill Method:

After the tillage and incorporation of fertilizer, sulfur, and compost is completed and accepted by the Engineer, seed shall be planted with a drill seeder capable of accurately metering the specific seed mix. Use of a drill seeder shall not damage the prepared seedbed and shall provide a soil cover over the planted seed.

Seed shall be planted approximately 1/4 inch deep, with a maximum depth of 1/2 inch. The distance between the furrows produced using the drill process shall not be more than eight (8) inches. If the furrow openers on the drill exceed eight (8) inches, the area shall be drilled twice. Seeding shall be done with grass seeding equipment with double disc openers, depth bands, packer wheels or drag chains, rate control attachments, seed boxes with agitators and separate boxes for small seeds. Seed of different sizes shall be sowed from at least two (2) separate boxes adjusted or set to provide the planting rate as specified.

(C) Hydroseed Method:

Areas and seed types not suitable for drill-seeding, as determined by the Engineer, shall be hydroseeded. The contract-specified seed shall be applied in a slurry containing 200 pounds of thermally-refined wood fiber and a minimum of 40 pounds tacking agent per acre. Seed shall not be in the slurry for more than 30 minutes. Hydroseeded areas shall have 100 percent (100%) coverage from all directions as evaluated by a Construction PLA, as well as approved by the Engineer. Hydroseeded areas shall also be mulched, as specified in Sections 3.04 or 3.05, within 24 hours of application of the seed.

(D) Manual Application:

Manually applied seeds shall be broadcast evenly to produce uniform distribution over the seeded areas.

3.04 Applying Straw Mulch as Final Mulch Cover on Top of Seeded Areas:

(A) General:

Within 24 hours after each area is planted, straw mulch shall be uniformly applied at the minimum rate of 2 1/2 tons per acre for areas to be crimped and tacked, and minimum two (2) tons per acre for tacked-only areas. Except for edge of pavement build-up areas, and unless otherwise specified by the Engineer, straw mulch shall be applied to all seeded areas. Areas to receive hydraulically applied straw mulch, if directed by the Engineer, shall be mulched in accordance with Section 3.05.

During seeding and mulching operations, care shall be exercised to prevent drifting and displacement of materials. Mulch material, which is placed upon trees and shrubs, roadways, structures, and upon any areas where mulching is not specified, or which is placed in excessive depths on mulching areas, shall be removed as directed. Mulch materials which are deposited in matted condition shall be loosened and uniformly spread to the specified depth over the mulching areas. Any unevenness in materials shall be immediately corrected by the contractor. In addition, the contractor shall minimize production of dust or other airborne particulate matter during application of straw mulch, either by moistening the straw, modifying equipment with misters, or through other means approved by the Engineer.

Except as specified in the next paragraph, straw mulch applied to seeded areas shall be immediately affixed by crimping and tacking after application. No mulch shall be applied to seeding areas which cannot be crimped and/or tacked by the end of each day. Any drifting or displacement of mulch before crimping and/or tacking shall be corrected by the contractor at no additional cost to the Department.

Crimping shall not be required for areas that are steeper than 3:1. Crimping may also be waived, when specifically directed by the Engineer, for drill seeded or hydroseeded areas with rocky conditions or other areas deemed unsuitable by the Engineer for crimping. Straw mulch applied to such areas shall only be tacked, as specified in Subsection 3.04(C) below.

Prior to the application of a tacking agent, protective covering shall be placed on all structures and objects where stains would be objectionable. All necessary precautions shall be taken to protect the traveling public and vehicles from damage due to drifting spray.

(B) Anchorage by Crimping:

Except as specified above in 3.04(A), crimping shall be required for all straw mulched areas. Straw mulch shall be anchored into the soil with a heavy disc. Discs shall be flat and serrated, with at least 1/4-inch thickness having dull edges, and spaced no more than nine (9) inches apart. Straw mulch shall be anchored to a depth of at least two (2) inches and shall not be covered with an excessive amount of soil. Anchoring operations shall be across the slopes where practical, with no more than two (2) passes of the anchoring equipment. Immediately following the crimping operation, the crimped area shall be tacked as specified in Subsection 3.04(C) below.

(C) Anchorage by Tacking:

Straw mulch shall be anchored by tacking, using a slurry consisting of a minimum of 150 pounds of tacking agent, 500 pounds of thermally refined wood fiber mulch, and 300 gallons of water per acre. The contractor may increase the quantities of components to ensure the stability of the straw mulch to provide erosion control during the 45-calendar-day maintenance period at no additional cost to the Department.

3.05 Hydraulically Applied Straw Mulch with Tacking Agent as Final Mulch Cover on Top of Seeded Areas:

Areas seeded but not practical for straw mulch, as determined by the Engineer, shall have hydraulically applied straw mulch with tacking agent applied at the variable rates shown in Table 5 below.

TABLE 5			
Slope (H:V)	Hydraulically Applied Straw Mulch (pounds per acre – dry weight)	Tacking Agent (pounds pure mucilage per acre – dry weight)	Thermally-Refined Wood Fiber (pounds per acre – dry weight)
Flat to 6:1	2,000	150	400
From greater than 6:1 to 3:1	2,500	150	500
Greater than 3:1	3,000	200	600
Erosive Soil Slopes or Highly Erosive Areas*	3,500	250	700
* As determined by Engineer			

The contractor shall submit a batch (tank) mix quantity schedule for mulch application to the Engineer for approval prior to mixing hydraulically applied straw mulch, thermally-refined wood fiber, and tacking agent in a slurry. Batch mixing and coverage will be monitored throughout the seeding operations. The contractor shall coordinate the mixing and application operations with the Engineer in advance of all mixing. Fertilizer or seed shall not be mixed into any slurry for temporary erosion control mulch application. To guarantee intimate seed-soil contact, seed shall not be mixed into any slurry with hydraulically applied straw mulch as final mulch cover.

3.06 Shoulder Build-up Areas — Edge of Pavement Build-up Areas:

Seeding shall be applied to all new earthen and milled asphaltic concrete edge of pavement build-up areas. Edge of pavement build-up areas shall be tilled two (2) inches deep from the toe of AC wedge to the toe of the edge of pavement build-up area prior to seeding.

After the two-inch tillage is complete, compost, fertilizer, seeding, and mulching shall be done in three (3) separate steps. For the first step, fertilizer and compost shall be broadcast evenly over both types of edge of pavement build-up areas. For the next step, seed shall be applied by hydroseeding for both types of areas. For the third step, seeded edge of pavement build-ups comprised of milled asphaltic concrete shall have hydraulically applied straw mulch and tacking agent applied, and earthen edge of pavement build-up areas shall have straw mulch or hydraulically applied straw mulch applied, with a tacking agent in either case. No crimping shall be required.

The application rate of hydraulically applied straw mulch and tacking agent shall be as specified in Table 5 above.

3.07 Seeding Acceptance:

After application, the Engineer will inspect seeded areas or sub-areas for conformance to the contract requirements. The contractor shall correct, to the satisfaction of the

Engineer, any areas not conforming to the specifications. The 45-calendar-day seeding maintenance period will begin upon Initial Seeding Construction Acceptance of an area by a Construction PLA through the Engineer.

The contractor shall maintain and stabilize each area or sub-area, including edge of pavement build-up area(s), for a minimum period of 45 calendar days, after Initial Seeding Construction Acceptance, as evaluated by a Construction PLA, as well as approved by the Engineer. Any areas damaged from erosion, or those that have less than 90 percent ($< 90\%$) of the remaining final mulch cover, shall be re-seeded, re-mulched, and re-tacked at no additional cost to the Department. The Construction PLA shall assess the seeded area in comparison to the pre-established half-acre (0.5 acre) sample demonstrative area for Class II Seeding to determine the necessity of re-seeding, re-mulching, and re-tacking.

A new 45-calendar-day maintenance period for an area is not required after re-seeding work, however the initial or original period remains in effect.

4.0 Method of Measurement:

Seeding (Class II) will be measured by the acre, to the nearest one acre of ground surface seeded. Measurements will be along the ground surface for the areas seeded and mulched, as approved by the Engineer.

5.0 Basis of Payment:

During pre-activity construction meeting, the contractor in conjunction with Engineer shall verify and be in agreement with the quantity of seeding areas as evaluated by a Construction PLA. The quantity of areas to be seeded shall be in compliance with environmental requirements.

The accepted quantities for Seeding (Class II), measured as provided above, will be paid in two (2) phases corresponding to the application stage and the 45-calendar-day maintenance stage.

Upon completion of the application stage through evaluation by a Construction PLA and acceptance by the Engineer in the presence of contractor, the contractor will be paid 70 percent (70%) of the contract bid price per acre for the completed work. Such price will be considered full compensation for furnishing and applying the contract-specified seed mix, fertilizers, soil amendments, tillage, mulch materials, and tacking agent, all required testing, as well as all equipment and labor required to complete the work as specified herein.

Upon completion of the 45-calendar-day seeding maintenance stage, and acceptance by a Construction PLA through the Engineer, the contractor will be paid the remaining 30 percent (30%) of the contract bid price per acre for the completed work. Such price will be considered full compensation for seeding maintenance, including all equipment,

labor, and materials required to correct deficiencies in seeded, mulched areas, as specified herein.

No measurement or payment will be made for any of the mobilizations required to apply and stabilize the seeding for each area or sub-area, as specified herein, the cost being considered as included in the contract price for Seeding (Class II).

No measurement or payment will be made for traffic control for work during the 45-calendar-day seeding maintenance period.

An adjustment to the contract will be made if a contractor-requested seed substitution is approved as specified in Subsection 2.02(B) above.

SECTION 806 TREES, SHRUBS AND PLANTS:

806-2.05 Prepared Soil: of the Standard Specifications is modified to add:

Prepared soil shall be prepared using a mixture of 90 percent excavated soil and 10 percent soil conditioner. Excavated material shall be considered useable for prepared soil provided that it meets the requirements herein. Clods or stones exceeding 2 inches in diameter and foreign matter deemed objectionable by the Engineer will not be allowed. 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. Prepared soil shall be free of any deleterious material and contaminants.

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 under the terms and conditions of the Standard Specifications and these Special Provisions, at no additional cost to the Department. The additional soil shall be collected from within the clearing limits of the project site as approved by the Engineer.

806-2.07 Water: of the Standard Specifications is modified to add:

Water used during landscape construction and for landscaping establishment as described herein to properly plant, maintain and care for and establish the plant material shall be furnished by the contractor. No separate measurement or payment will be made for the water. Water shall be delivered to the installed plants as described in Section 808 of these Special Provisions. It shall be the contractor's responsibility to secure the necessary sources, permits and approvals.

806-2.10 Hardware: of the Standard Specifications is modified to add:

Hardware materials shall include but not be limited to bracing and guying materials; liners and fabrics; and calibrated measuring materials and devices.

806-3.01 General: of the Standard Specifications is modified to add:

It shall be the contractor's responsibility to determine the exact location of the utilities prior to construction operations and to notify the affected utility companies at least two working days prior to commencing any work on the project.

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

Trees and shrubs shall be of the specified container size and/or height and shall be adequately supported.

Prior to plant layout, all grasses and weeds shall be removed from the planting areas.

All plantings shall be located in accordance with the ADOT recovery zone requirements as approved by the Engineer.

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

All planting pits shall be filled completely with water (in addition to water from the new irrigation system) and allowed to drain completely, to ensure that the entire depth of the planting pits are thoroughly watered. The contractor shall obtain approval from the Engineer for the proposed watering method, as described above. Within one day of the filling of planting pits with water and their draining, the irrigation system shall be used to water the planting pits for 12 hours.

Within 24 hours after the plants are planted and planting pits are filled with soil the irrigation system shall be used to water a minimum duration of 8 hours. Following this watering the contractor shall water as approved by the Engineer. Watering shall be minimal from November 1st to April 1st.

The contractor shall maintain and protect all planting areas in accordance with all requirements under Subsection 806-3.06 of the Standard Specifications. All existing undesirable competing grasses and weeds shall be eradicated from planting pit with herbicides or by the manual method during Phase 1 of the project, and shall be disposed of by the contractor in a legal manner, as approved by the Engineer.

The contractor shall pay special attention to the infestation of noxious and invasive plants. Either of these items found in the planting pits shall be grounds for immediate removal and disposal. The planting pit shall be excavated and inspected to assure

complete eradication of roots or rhizomes that may have grown into the area. This work and all materials associated shall be the responsibility of the contractor, and shall be completed by the contractor, at no additional cost to the Department.

All planting areas shall be graded as specified and required to facilitate proper watering of the plant materials and the planting areas shall be graded so as to leave a generally smooth appearance after the completion of planting, as approved by the Engineer.

806-3.02 Excavation: of the Standard Specifications is modified to add:

Planting pits shall be excavated in a manner so that water will drain naturally within one hour from a pit filled to the top of the hole. All weeds or other objectionable materials unsuitable for backfill shall be removed from the site and disposed of by the contractor.

806-3.04 (A) General: of the Standard Specifications is modified to add:

The plant locations on the plans are diagrammatic. The contractor shall modify the plant locations and rearrange the plant materials as needed to be in compliance with the clear zone requirements and to create a naturalized appearance that is harmonious to natural plant groupings found in the project area. The location of the plantings as recommended by the contractor shall be staked for approval by the Engineer. Each plant species, as applicable, shall be flagged with different colored flags. Once approved, adjust planting locations only as directed.

806-3.04 (B) Nursery Stock: the eleventh paragraph of the Standard Specifications is revised to read:

Immediately after planting, all plants shall be well irrigated with the irrigation system until the backfill soil is brought to 100 percent water holding capacity. 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.

ITEM 8060066 – PRUNING & SHAPING TREES SHRUBS & PLANTS:

Description:

The work under Pruning & Shaping Trees Shrubs & Plants shall consist of pruning existing trees designated to remain in place that are in conflict with new work. The trees to be pruned shall be identified by the Engineer. The work shall be done by or supervised by a certified arborist. The work shall include providing necessary tools, removing all debris from the area, and taking it to a proper disposal site.

Construction Requirements:

Pruning work shall be performed in accordance with *ANSI-A-300 (Part 1)-2008 Pruning*, as published by the Tree Care Industry Association, Inc. (Telephone: 1-800-733-2622, website: www.tcia.org); and *Best Management Practices, Tree Pruning (Revised 2008)*, as published by the International Society of Arboriculture (Telephone: 1-217-355-9411, website: www.isa-arbor.com). The Contractor is expected to be familiar with accepted horticulture practices as defined by these guidelines. All pruning work shall be performed or supervised by a certified arborist.

Pruning shall be kept to a minimum and should only be done in order to achieve the following objectives (summarized from *ANSI A300 (Part 1)-2008*):

- a. Pruning shall be limited to the objectives of restoration (removing dead, damaged or diseased branches), managing health, providing clearance, or risk reduction.
- b. No more than 25% of the foliage shall be removed.
- c. Excessive branch removal on the lower two-thirds of a branch of stem is to be avoided. If excessive pruning is necessary to avoid conflicts with project construction, the arborist is to bring this to the attention of the project engineer.

Pruning cuts shall be made according to these practices:

- a. Pruning tools shall be sharp. Pruning equipment that damages living tissues and bark beyond the scope of normal work practices shall be avoided.
- b. Pruning cuts shall remove a branch at its point of origin, close to the trunk or parent branch. It shall not cut into the branch bark ridge or branch collar or leave a stub.
- c. Branches shall never be left cut mid-branch. When pruning to a lateral, the remaining lateral branch should be large enough to assume the terminal role. The final cut should result in a flat surface with adjacent bark firmly attached.

- d. When removing a dead branch, the final cut shall be made just outside the collar of living tissue.
- e. Tree branches shall be removed in such a manner so as to avoid damage to other part of the tree or to other plants or property. Severed branches shall be removed from the crown upon completion of the pruning, at times when the tree would be left unattended, or at the end of the workday.
- f. Wound treatments shall not be used to cover wounds or pruning cuts, except when necessary for disease, insect, or mistletoe.

Method of Measurement:

Pruning & Shaping Trees Shrubs & Plants will be measured as a single complete unit of work.

Basis of Payment:

The accepted quantities of Remove and Salvage (Mesquite Trees), measured as provided above for Pruning & Shaping Trees Shrubs & Plants, measured as provided above, will be made at the contract lump sum price, which price shall be full compensation for the work, complete in place including proper disposal site, dumping fees and the time the certified arborist is on site.

ITEM 8070011 LANDSCAPING ESTABLISHMENT

807-1 Description: of the Standard Specifications is revised to read:

The work under this project shall be divided into two phases. The Construction Phase shall consist of the work to be done under all contract items except that under the references to landscape establishment. The Landscape Establishment Phase shall consist exclusively of the work to be done under the item of landscape establishment. Until final written acceptance of the Landscape Establishment Phase activities, the requirements of Subsections 104.09 and 104.10 of the Standard Specifications and these Special Provisions shall apply. Specifically, Item 8050003 contains requirements that apply to this Section.

The contractor shall keep a log of all Landscape Establishment Phase activities. The log shall contain a record of the time and date of field inspections, fertilizer applications, and other operations conducted by the contractor. The contractor shall provide for approval the format for recording these activities prior to undertaking the work and submit monthly to the Engineer.

The contractor shall be required to maintain all landscaping areas that were installed under this contract.

Phase I of the contract shall consist of all items under this contract other than Item 8070011 - Landscape Establishment. When all work is completed under Phase I of the contract and approved by the Resident Engineer, Phase II of the contract shall begin. No work or contract time under Phase II of the project shall begin until all work under Phase I is considered complete by the Resident Engineer.

807-2 Materials: of the Standard Specifications is modified to add:

The water used during Landscaping Establishment to properly maintain the plant material shall be furnished and paid for by the contractor.

The contractor shall notify the Engineer and obtain prior approval for the use of any chemicals for weed eradication or control.

807-3.01 General: of the Standard Specifications is modified to add:

Landscape establishment shall be 24 calendar months in accordance with these Special Provisions.

The contractor shall provide adequate water to each installed plant to maintain optimum health through the completion of the 24 months of the plant establishment period. It is the intent of the Department that the volume of water supplied to the installed plants during the last 4-6 months of the applicable portion of the establishment period is systematically reduced to zero as soon as possible, without jeopardizing the long-term survivability of the plants. It is anticipated that after the establishment period, no supplemental watering will be provided to the plants. The contractor shall identify how this objective will be achieved. This objective and/or the rate of reduction of supplemental watering may be modified by the Engineer during the course of the establishment period based on climatic factors, seasonal considerations and the success of the replanting.

Watering may be temporarily suspended as directed by the Engineer during periods of rainfall or cold weather. The contractor shall adjust the quantity of water supplied to the plants, corresponding to weather and site conditions, to provide optimum growing conditions at no additional cost to the Department. Adjusting the water schedule as necessary to meet the project objectives is the sole responsibility of the contractor and may require numerous mobilizations to accomplish.

Watering Schedule for Newly Planted Trees (Minimum Requirements)			
	<u>Winter/Spring</u> <u>Dec 1 – April 30</u>	<u>Summer</u> <u>May 1 – Sept 30</u>	<u>Fall</u> <u>Oct 1 – Nov 30</u>
<u>Weeks 1 - 3</u>	Every three days	Daily when temps are 100 degrees or higher Every other day when temps are below 100 degrees	Every three days
<u>Weeks 4 - 6</u>	Every seven days	Every two days when temps are 100 degrees or higher Every three days when temps are below 100 degrees	Every five days
<u>Weeks 7 - 9</u>	Every seven days	Every three days	Every seven days
<u>Weeks 10 - 12</u>	Every ten days	Every three days when temps are 100 degrees or higher Every five days when temps are below 100	Every seven days
<u>After Week 12</u>	Every ten days	Every three days when temps are 100 degrees or higher Every seven days when temps are below 100 degrees	Every ten days

NOTES:

1. Contractor shall adjust watering schedule based on rainfall received. Water shall not be applied if the soil is saturated.
2. The amount of water to be applied per tree at each watering is five gallons minimum. This water must be in contact with root ball of tree.
3. Watering shall be accomplished by filling the berms around individual trees to a minimum depth of 1" within the larger water harvesting basin. When filling individual berms, each tree must receive a minimum of five gallons of water per watering occurrence. Refer to Landscape Details.
4. Every watering should moisten the soil to a minimum depth of 18". Depth of watering shall be verified by inserting a metal rod (3/8 or greater in diameter) into the ground 10" away from trunk of tree. Rod should push (with minimal pressure) a minimum of 18" into the ground.
5. Watering shall be performed in a manner that does not erode the basins and/or berms.

The landscape contractor shall be the only contractor that performs the work under Landscape Establishment Phase. Subcontracting of this work shall not be permitted, except, if needed, for weed eradication with herbicides which require special licensing.

All landscape plants shall be provided protection, which shall include, but not be limited to, eradication or control of insects, mites, fungi, and non-fungus diseases. The application of appropriate insecticide, miticides and fungicide may only be used with the prior approval of the Engineer. No insecticides, fungicides and miticides employed during the term of the contract shall cause the extermination of landscape plant material, or cause damage to the growth characteristics such that plants will not be able to recover in a normal manner.

No chemical shall stain or cause damage to the site or improvements including landscape plant materials. If staining or damage occurs, repairs or replacements shall be made at the contractor's expense to the satisfaction of the Engineer.

Application of chemicals shall be in such a manner so as to not cause injury to the personal health of anyone working on the project, observing, or passing by. Care shall be taken such that no puddles or pools of water, which may contain toxic amounts of chemicals, shall remain after completion of operations. Chemicals shall not be allowed to fall on or migrate to areas other than the work site. All laws and local codes shall be followed regarding application methods and personnel.

The landscape establishment period shall begin upon the completion of the approved, final planting of a particular planting lot at the discretion of the Engineer and upon receiving written notice from the Engineer to the contractor.

The Engineer will perform visual inspections in the presence of the contractor each month of the establishment period, unless the Engineer and the contractor agree to other arrangements in writing. The contractor shall modify the maintenance practices and water delivery to the plants to maintain optimum growing conditions as directed by the Engineer.

The contractor will have no further contractual responsibilities for plants accepted at the 24-month inspection.

Transporting of plant materials for the landscape establishment activities shall be in compliance with all State and local requirements. The contractor shall obtain all necessary permits and tags for transporting plant materials 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.

807-4 Method of Measurement: of the standard Specifications is modified to add:

Landscape establishment will be measured by the month.

807-5 Basis of Payment: of the Standard Specifications is modified to add:

Landscaping establishment, measured as provided above, will be paid for at the contract unit price per month, which price shall be full compensation for the work, complete in place, as specified herein. Traffic control, per Section 701 Maintenance and Protection of Traffic, if required during the landscaping establishment period, shall be considered as included in the price of the contract item.

All costs associated with truck watering, including but not limited to, trucks, repair of berms, and labor, shall be included in the lump sum price for this bid item.

ITEM 9030008 FENCE (TEMPORARY PRESERVATION FENCE FOR EXISTING TREES):

Description:

The work under Fence (Temporary Preservation Fence for Existing Trees) consists of furnishing all labor, tools and materials to install, maintain and remove all preservation fence.

Materials:

Fencing will consist of high visibility orange, heavy duty High Density Polyethylene (HDPE) that is UV resistant. The fencing shall be four feet (4') tall. Fence posts will be either wood or metal and shall be suitable for the work intended and a minimum of six feet (6') long.

Construction Requirements:

Preservation fencing shall be installed in locations shown in the Plans prior to clearing and grubbing. Fencing shall be installed at the dripline of each tree or group of trees. Fencing shall remain in place for the duration of construction operations. Fencing that is damaged or destroyed shall be repaired or replaced by the contractor within 2 working days.

Method of Measurement:

Fence (Preservation Fence for Existing Trees) shall be measured by the linear foot of fence in place.

Basis of Payment:

The accepted quantities of Fence (Preservation Fence for Existing Trees) measured as provided above will be made at the contract unit price and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals required to furnish, install, maintain and remove the preservation fencing.

ITEM 9080402 – CONCRETE HEADER (DETAIL C):

Description:

The work under Concrete Header (Detail C) shall consist of constructing the concrete header at the locations shown in the project plans and in accordance with Detail C of the project plans and these specifications.

Materials:

Material requirements shall conform to Subsection 908-2 of the specifications.

Construction Requirements:

Construction requirements shall conform to Subsection 908-3 of the specifications.

Method of Measurement:

Concrete Header (Detail C) will be measured by the linear foot.

Basis of Payment:

The accepted quantities of Concrete Header (Detail C), measured as provided above, will be paid at the contract unit price per linear foot, which price shall be full compensation for the work, complete in place, including furnishing and placing embankment material,

excavating, removing unstable material, backfilling and compacting.

ITEM 9080502 - CONCRETE FORD WALL (C-19.10; 1'x2')

Description:

The work under Concrete Ford Wall (C-19.10; 1'x2') consists of furnishing all materials and constructing concrete ford walls at the locations shown on the project plans, and in accordance with the details shown on the project plans and the requirements of these Special Provisions.

Materials:

Concrete shall conform to the requirements of Subsection 908-2 of the specifications.

Reinforcing Steel shall conform to the requirements of Sections 605 and 1003 of the specifications. All reinforcing steel shall be Grade 60.

Construction Requirements:

All work shall conform to Subsections 601-3, 605-3, 908-3 of the specifications.

Method of Measurement:

Concrete Ford Wall (C-19.10; 1'x2') will be measured by the linear foot along the centerline of its top surface.

Basis of Payment:

The accepted quantities of Concrete Ford Wall (C-19.10; 1'x2'), 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 excavation and backfill.

(913BKPRT, 02/18/21)

SECTION 913 - BANK PROTECTION: of the Standard Specifications is revised to read:

913-1 Description:

The work under this section shall consist of furnishing all materials and constructing bank protection in accordance with the details shown on the plans and the requirements of the specifications.

Bank protection shall be dumped riprap, grouted riprap, wire tied riprap, riprap in wire baskets or gabions, soil-cement, and other types of bank protection and shall be constructed at the locations and as shown on the plans.

913-2 Materials:

913-2.01 Riprap Bank Protection:

(A) Rock:

Rock shall be sound and durable, free from clay or shale seams, cracks or other structural defects.

The bulk (SSD) specific gravity of the rock shall be a minimum of 2.4 as determined in accordance with the requirements of Arizona Test Method 210.

Rock used to construct dumped riprap shall be angular in shape. Rock used to construct other types of bank protection may be rounded stones or boulders. Rock shall have a least dimension not less than one-third of its greatest dimension and a gradation in reasonable conformity with that shown herein for the various types of bank protection. Control of the gradation will be by visual inspection.

When a source of rock is designated by the Department, it shall be the contractor's responsibility to negotiate for the material, obtain the right-of-way, and pay all royalties and damages.

The acceptability of the rock will be determined by the Engineer by visual inspection and/or testing. If testing is required, suitable samples of rock shall be taken in the presence of the Engineer at least 25 days in advance of its expected use. The approval of some rock fragments from a particular quarry site shall not be construed as constituting the approval of all rock fragments taken from that quarry.

During construction of the bank protection, the contractor shall provide two samples of rock for the intended use. The amount of each sample for dumped riprap and riprap (slope mattress) shall be at least five tons. The amount of each sample for grouted

riprap, wire tied riprap, gabions, and rail bank protection shall be at least 500 pounds. One sample shall be provided at the construction site and may be a part of the finished bank protection. The other sample shall be provided at the quarry. These samples will be used as a frequent reference for judging the gradation of the rock supplied. Any difference of opinion between the Engineer and the contractor shall be resolved by checking the gradation of two random samples of the rock.

Material that is deemed unacceptable by the Engineer shall be replaced with acceptable material at no additional cost to the Department.

(1) Grouted Riprap:

Gradation of the rock for grouted riprap shall be as specified in the Special Provisions or as shown on the plans.

(2) Wire Tied Riprap:

Rock for wire tied riprap shall be well graded with at least 95 percent exceeding the least dimension of the wire mesh opening. The maximum size rock, measured normal to the mat, shall not exceed the mat thickness.

(3) Dumped Riprap:

Gradation of the rock for dumped riprap shall be as shown on the plans or as specified in the Special Provisions.

All equipment, sorting sites, and labor needed to check gradation shall be provided by the contractor at no additional cost to the Department.

(4) Gabions:

Rock for gabions shall be well graded, varying in size from 4 to 8 inches.

(5) Riprap (Slope Mattress):

Rock for slope mattress shall be well graded with 70 percent exceeding three inches. The maximum dimension of a single rock shall not exceed the least dimension of the gabion.

(6) Rail Bank Protection:

Rail bank protection rock shall be well graded, varying in size from 4 to 12 inches.

(B) Metal Items:

(1) Wire Fabric:

Welded wire fabric shall be galvanized and shall conform to the requirements of AASHTO M 336, except that the minimum weight of the zinc coating shall be 0.15 ounces per square foot of actual surface.

Woven wire fabric shall be galvanized and shall conform to the requirements of ASTM A116, except that the minimum weight of the zinc coating shall conform to the requirements of ASTM A641, Class 3.

Wire fabric shall be of the diameter, spacing, pattern, and dimensions shown on the plans. The selvage on each sheet of mesh shall be galvanized steel wire with a minimum diameter 25 percent larger than that used in the body of the mesh.

Certificates of Compliance conforming to the requirements of Subsection 106.05 of the specifications shall be submitted to the Engineer.

(2) Miscellaneous Fittings and Hardware:

Miscellaneous fittings and hardware shall be of the type and size provided by the manufacturer of the major item to which they apply and shall be galvanized in accordance with the requirements of AASHTO M 232.

Certificates of Compliance conforming to the requirements of Subsection 106.05 of the specifications shall be submitted to the Engineer.

(3) Tie Wires:

Tie wires shall be of good commercial quality and the size shall be as shown on the plans, except that the minimum weight of the zinc coating shall conform to the requirements of ASTM A641, Class 3. The contractor may use approved wire fasteners on gabions, slope mattresses, or wire fabric in lieu of tie wires.

Certificates of Compliance conforming to the requirements of Subsection 106.05 of the specifications shall be submitted to the Engineer.

(4) Steel Cable:

Steel cable shall be zinc-coated steel structural wire rope conforming to the requirements of ASTM A475, seven-wire strand, Class A, for the diameter shown on the plans.

Certificates of Compliance conforming to the requirements of Subsection 106.05 of the specifications shall be submitted to the Engineer.

(5) Railroad Rail:

Railroad rails may be new or used. If used rails are furnished, they shall be free from rust and equal to at least 95 percent of the original section.

(6) Soil Anchor Stakes:

Soil anchor stakes shall be made of steel and of the length shown on the plans. When not specified to be railroad rails, the following items may be used: crane rails with a weight of at least 40 pounds per linear foot, 2-inch diameter steel pipe conforming to the requirements of ASTM A53, or 3-inch by 3-inch by 3/8-inch structural steel angles conforming to the requirements of ASTM A36. Used rails, pipes or angles may be used provided the material is not rusted or damaged to the extent that the strength of the item is reduced to less than 90 percent of a new item of the same type and size.

Certificates of Compliance conforming to the requirements of Subsection 106.05 of the specifications shall be submitted to the Engineer.

(C) Bedding Material:

Bedding material shall consist of granular material having a maximum dimension of 2 inches and shall be free of clay or organic material.

(D) Grout:

Grout shall consist of Portland cement, aggregate, and water. It may also contain supplementary cementitious material. Portland cement, aggregate, water, and supplementary cementitious material shall conform to the requirements of Section 1006 of the specifications. Chemical admixtures may be used and shall conform to the requirements of Subsection 1006-2.04 of the specifications, except no admixtures containing chlorides or nitrates shall be used. Air-entraining admixtures, conforming to the requirements of Subsections 1006-2.04 and 1006-3.01(E) of the specifications, shall be required for grout placed at elevations of 3000 feet or above.

The grout shall meet the requirements shown in table 1:

Table 1			
Minimum Cementitious Material Content: Lbs per CY (See Note 1)	Maximum Water/Cementitious Material Ratio (w/cm): Lb./Lb.	Slump: Inches (See Note 2)	Air Content: Percent (See Note 3)
850	0.60	9 ± 2	0 – 8
Notes: (1) A maximum of 25 percent of the cementitious material, by weight, may consist of an approved Class F fly ash, conforming to the requirements of ASTM C618. (2) The slump shall be in the appropriate range to permit gravity flow into the interstices with limited spading and brooming. The consistency of the grout shall be as approved by the Engineer. (3) For placement of grout at elevations of 3000 feet or above, the air content shall be a minimum of 4 percent and a maximum of 8 percent.			

The mix shall consist of fine aggregate; however, the contractor may use No. 8 coarse aggregate in the grout. If No. 8 coarse aggregate is used, the volume shall be a maximum of 35 percent of the total aggregate volume.

For plant-mixed grout, the proportioning, mixing, and placing shall be in accordance with the applicable requirements in Section 1006 of the specifications.

For on-site mixing, grout that has been mixed more than one hour shall not be used.

Retempering of grout will not be permitted.

(E) Bank Protection Fabric:

Fabric shall be supplied in accordance with and conform to the material requirements of Subsections 1014-1 and 1014-5 of the specifications, respectively. Special attention shall be given to the required survivability of the fabric.

The identification, packaging, handling, and storage of the geotextile fabric shall be in accordance with ASTM D4873. Fabric rolls shall be furnished with suitable wrapping for protection against moisture and extended ultraviolet exposure prior to placement. Each roll shall be labeled or tagged to provide product identification sufficient to determine the product type, manufacturer, quantity, lot number, roll number, date of manufacture,

shipping date, and the project number and name to which it is assigned. Rolls shall be stored on-site or at another storage location in a manner which protects them from the elements. If stored outdoors, rolls shall be elevated and protected with a waterproof, light colored, opaque cover. At no time, shall the fabric be exposed to sunlight for a period exceeding 14 days.

(F) Sacked Concrete:

Sacked concrete shall be utility concrete conforming to the requirements of Section 922 of the specifications, except that the minimum cement content shall be 376 pounds per cubic yard; the slump shall be from 3 to 5 inches; and the aggregate shall conform to the gradation requirements shown in table 2 when tested in accordance with the requirements of Arizona Test Method 201:

Table 2	
Sieve Size	Percent Passing
2 inch	100
1/4 inch	45 - 89
No. 200	0 -12

Sacks for sacked concrete riprap shall be made of at least AASHTO M 182, Class 3, burlap and shall be approximately 19-1/2 by 36 inches measured inside the seams when the sack is laid flat, with an approximate capacity of 1-1/4 cubic feet. Sound, reclaimed sacks may be used.

913-2.02 Soil-Cement Bank Protection:

(A) Hydraulic Cement, Fly Ash, and Water:

Hydraulic cement, fly ash, and water shall conform to the requirements of Subsection 1006-2 of the specifications.

(B) Soil-Aggregate:

The source of soil-aggregate materials shall be the responsibility of the contractor. The contractor shall be solely responsible for the construction of the stockpile(s), including monitoring for quality and uniformity of the material placed therein. The soil-aggregate used in the soil-cement mixture shall consist of stones, gravel or other approved inert material of similar characteristics, and shall be clean and free from vegetable matter and other deleterious substances. Soil-cement aggregate shall conform to the gradation requirements shown in table 3 when tested in accordance with Arizona Test Method 201:

Table 3	
Soil-Cement Aggregate	
Sieve Size	Percent Passing
1-1/2 in	98 - 100
No. 4	60 - 90
No. 200	5 - 15

Class 2 ABC may be used in-lieu of aggregate meeting the requirements of the table 3. The contractor may submit a request to use alternate material to the Engineer for review and approval.

The Plasticity Index shall be a maximum of seven when tested in accordance with the requirements of AASHTO T 90.

Clay lumps larger than 1 inch shall be removed.

When soil-aggregates are stored on the ground, the sites for the stockpiles shall be clear of all vegetation and level. The bottom six inch layer of aggregate stored on the ground shall not be disturbed or used.

The debris or waste material resulting from the clearing and preparing of the site shall be disposed of in accordance with Subsection 201-3.02 of the specifications.

(C) Mix Design Requirements for Soil-Cement Bank Protection:

Utilizing soil-aggregate, cementitious material, and water, a mix design conforming to the requirements specified herein shall be formulated and submitted by the contractor to the Engineer for approval prior to incorporating any of the material into the work.

The amount of cement shall be determined by laboratory testing by the contractor in accordance with Arizona Test Method 220. For mix design purposes only, the cement content of the soil-cement mixture shall be determined as the cement content which yields a seven day compressive strength of 1250 psi for the soil-cement mixture.

The percent of cement to be used in the mix shall be calculated to be the weight of cement divided by the total weight of the dry compacted soil-cement.

Included in the mix design data shall be the grade of cement, brand of fly ash, and the source of aggregate. A new mix design shall be submitted for approval any time the contractor requests a change in soil-aggregate source from that given in the approved mix designs.

913-3 Construction Requirements:

913-3.01 Riprap Bank Protection:

Areas on which bank protection is to be constructed shall be cleared, grubbed, and excavated or backfilled in accordance with the requirements of the appropriate sections of Division II to produce a ground surface in reasonable conformance with the lines and grades shown on the plans or established by the Engineer.

Placement through water will not be permitted unless otherwise approved by the Engineer.

Areas which are excavated for installation of rail bank protection shall be backfilled to original ground or to the lines and grades shown on the plans.

(A) Bank Protection Fabric:

When fabric is required, it shall be placed in the manner and at the locations shown on the plans. The surface to receive the fabric shall be free of obstructions, depressions and debris. The fabric shall be loosely laid and not placed in a stretched condition.

The strips shall be placed to provide a minimum 24 inches of overlap for each joint. On horizontal joints, the uphill strip shall overlap the downhill strip. On vertical joints, the upstream strip shall overlap the downstream strip. The fabric shall be protected at all times during construction from extensive exposure to sunlight.

When the maximum size of the rock to be placed on fabric exceeds 18 inches, the fabric shall be protected during the placement of the rock by a layer of bedding material. The bedding material shall be spread uniformly on the fabric to a depth of 4 inches and shall be free of mounds, dips or windrows. Compaction of the bedding material will not be required.

Rock shall be carefully placed on the bedding material and fabric in such a manner as not to damage the fabric. If, in the opinion of the Engineer, the fabric is damaged or displaced to the extent that it cannot function as intended, the contractor shall remove the rock, regrade the area if necessary, and replace the fabric.

(B) Dumped Riprap:

The rock shall be placed to its specified thickness in one operation and in a manner which will produce a reasonably well graded mass with a minimum amount of voids and with the larger rock evenly distributed throughout the mass.

No method of placing the rock that will cause segregation will be allowed. Hand placing or rearranging of individual rock may be necessary to obtain the specified results.

(C) Wire Tied Riprap:

After installation of the lower portion of the wire mesh, rock shall be placed in accordance with the requirements of Subsection 913-3.01(B) of the specifications.

After placement of the rock, the upper portion of the wire mesh shall be placed, laced, and tied in accordance with the details shown on the plans.

(D) Grouted Riprap:

Rock for grouted riprap shall be placed in accordance with the requirements of Subsection 913-3.01(B). The stones shall be thoroughly moistened and any excess of fines shall be sluiced to the underside of the stone blanket before grouting.

The grout may be delivered to the place of final deposit by any means that will ensure uniformity and prevent segregation of the grout. If penetration of grout is not obtained by gravity flow into the interstices, the grout shall be spaded or rodded to completely fill the voids in the stone blanket. Pressure grouting shall not unseat the stones, and during placing by this method, the grout shall be spaded or rodded into the voids.

Penetration of the grout shall be to the depth specified on the plans. When a rough surface is specified, stones shall be brushed until 25 to 50 percent of the depth of the maximum size stone is exposed. For a smooth surface, grout shall fill the interstices to within 1/2 inch of the surface.

Grout shall not be placed when the descending air temperature falls below 40 degrees Fahrenheit nor until the ascending air temperature rises above 35 degrees Fahrenheit. Temperatures shall be taken in the shade away from artificial heat.

Curing of the grout shall be in accordance with the requirements of Subsection 912-3.09 of the specifications.

The contractor may use shotcrete conforming to the requirements of Section 912 of the specifications in lieu of grout.

(E) Slope Mattress Riprap:

The mattress bed shall be excavated to the width, line and grade as shown on the plans. The mattress shall be founded on this bed and laid to the lines and dimensions required.

Excavation for toe or cut-off walls shall be made to the neat lines of the wall.

Mattresses shall be fabricated in such a manner that the sides, ends, lid and diaphragms can be assembled at the construction site into rectangular units of the specified sizes. Mattresses are to be of single unit construction, the base, ends and

sides either to be woven into a single unit or one edge of these members connected to the base section of the unit in such a manner that strength and flexibility at the point of connection is at least equal to that of the mesh.

All perimeter edges of the mattresses are to be securely selvaged or bound so that the joints formed by tying the selvages have at least the same strength as the body of the mesh.

Mattresses shall be placed to conform to the details shown on the plans. Stones shall be placed in close contact within the unit so that maximum fill is obtained. The units may be filled by machine with sufficient hand work to accomplish the requirements of this specification.

Broken concrete shall not be used in slope mattresses.

Before the mattress units are filled, the longitudinal and lateral edge surfaces of adjoining units shall be tightly connected by means of wire ties placed every four inches or by a spiral tie having a complete loop every four inches. The lid edges of each unit shall be connected in a similar manner to adjacent units. The slope mattress shall be anchored as shown on the plans. Each anchor stake shall be fastened to the cover mesh with a tie wire.

(F) Gabions:

The gabion bed shall be excavated to the width, line and grade as shown on the plans. The gabions shall be founded on this bed and laid to the lines and dimensions required.

Excavation for toe or cut-off walls shall be made to the neat lines of the wall.

Gabions shall be fabricated in such a manner that the sides, ends, lid and diaphragms can be assembled at the construction site into rectangular units of the specified sizes. Gabions are to be of single unit construction, the base, ends and sides either to be woven into a single unit or one edge of these members connected to the base section of the unit in such a manner that strength and flexibility at the point of connection is at least equal to that of the mesh.

Where the length of the gabion exceeds its horizontal width, the gabion is to be equally divided by diaphragms, of the same mesh type as the body of the gabions, into cells whose length does not exceed the horizontal width. The gabion shall be furnished with the necessary diaphragms secured in proper position on the base section in such a manner that no additional tying at this juncture will be necessary.

All perimeter edges of gabions are to be securely selvaged or bound so that the joints formed by tying the selvages have at least the same strength as the body of the mesh.

Gabions shall be placed to conform to the details shown on the plans. Stones shall be placed in close contact in the unit so that maximum fill is obtained. The units may be filled by machine with sufficient hand work to accomplish requirements of this specification.

The exposed face or faces shall be hand-placed using selected stones to prevent bulging of the gabion cell and to improve appearance. Each cell shall be filled in three lifts.

Two connecting tie wires shall be placed as shown on the plans between each lift in each cell.

Care shall be taken to protect the vertical panels and diaphragms from being bent during filling operations.

The last lift of stones in each cell shall be level with the top of the gabion in order to properly close the lid and provide an even surface for the next course.

All gabion units shall be tied together each to its neighbor along all contacting edges in order to form a continuous connecting structure.

Empty gabions stacked on filled gabions shall be laced to the filled gabion at the front, side and back.

(G) Sacked Concrete Riprap:

The sacks shall be filled with concrete, loosely packed so as to leave room for folding or tying at the top. Approximately one cubic foot of concrete shall be placed in each sack. Immediately after filling, the sacks shall be placed according to the details shown on the plans and lightly trampled to cause them to conform with the earth face and to adjacent sacks in place.

The first two courses shall provide a foundation of double thickness. The first foundation course shall consist of a double row of stretchers laid level and adjacent to each other in a neatly trimmed trench. The trench shall be cut back into the slope a sufficient distance to enable proper subsequent placement of the riprap. The second foundation course shall consist of a row of headers placed directly above the double row of stretchers. The third and remaining courses shall consist of a double row of stretchers and shall be placed in such a manner that joints in succeeding courses are staggered.

All dirt and debris shall be removed from the top of the sacks before the next course is laid thereon. Stretchers shall be placed so that the folded ends will not be adjacent. Headers shall be placed with the folds toward the earth face. Not more than four vertical courses of sacks shall be placed in any tier until initial set has taken place in the first course of any such tier.

When there will not be proper bearing or bond for the concrete because of delays in placing succeeding layers of sacks, a small trench shall be excavated back of the row of sacks already in place, and the trench shall be filled with fresh concrete before the next layer of sacks is laid. The size of the trench and the concrete used for this purpose shall be approved by the Engineer. The Engineer may require header courses at any level to provide additional stability to the riprap.

Sacked concrete riprap shall be cured by being covered with a blanket of wet earth or by being sprinkled with a fine spray of water every two hours during the daytime for a period of four days.

(H) Rail Bank Protection:

Excavation, where required for rock fill, shall be performed in reasonably close conformity to the lines and grades established or shown on the plans.

Rails shall be driven at the locations and to the minimum penetrations shown on the plans. Driving equipment shall be capable of developing sufficient energy to drive the rails to the specified minimum penetration and be approved by the Engineer.

If hard material is encountered during driving before minimum penetration is reached and it has been demonstrated to the satisfaction of the Engineer that additional attempts at driving would result in damage to the rails, the Engineer may order additional work to be performed, such as jetting or drilling, in order that minimum penetration may be obtained or the Engineer may order the minimum penetration to be reduced as required by the conditions encountered.

Wire fabric shall be securely fastened to the rails, placed in the trenches and laid on the slopes. The rock backfill shall then be carefully placed so as not to displace the wire fabric or rails. The wire fabric shall entirely enclose the rock backfill.

The completed rock fill shall be backfilled as necessary and the waste material disposed of as directed by the Engineer.

913-3.02 Soil-Cement Bank Protection:

Soil-cement bank protection construction shall include excavating, backfilling, and grading the wash bed and banks to the lines, grades and cross sections shown on the plans or established by the Engineer; furnishing and mixing aggregate, cement, fly ash and water; and spreading, compacting, and curing the mixture.

The contractor shall investigate for ground water as soon as possible. If there is a need for dewatering, the contractor shall provide to the Engineer for review a comprehensive dewatering plan a minimum of two weeks before construction starts. The dewatering plan shall address any water quality requirements of the Corps of Engineers permit and

ADEQ certification. Dewatering activities shall not begin until the Engineer has approved the plan.

The dewatering shall comply with all laws and permit requirements.

If changes to the approved dewatering plan are required, the contractor shall submit a revised plan to the Engineer for approval.

For soil-cement bank protection, the contractor shall be responsible for quality control as necessary to meet the requirements established herein. The contractor shall monitor the complete mix during construction of soil-cement, including the amounts of cement and fly ash used.

(A) Required Contractor Submittals:

Two weeks prior to the start of the soil-cement bank protection construction, the contractor shall submit in writing to the Engineer for approval, the following items:

- (1) The type of spreading and compaction equipment to be used.
- (2) The number and type of watering equipment to be used.
- (3) The method used to keep surfaces continuously moist until subsequent layers of soil-cement are placed.
- (4) The method used to cure permanently exposed surfaces.
- (5) The proposed source of soil-aggregate.
- (6) The proposed source(s) of Portland cement and fly ash (if used).
- (7) The approximate length of soil-cement bank protection or area of soil-cement to be placed each day prior to starting placement and compaction operations, on a daily basis.
- (8) The soil-cement mix design.

Such submittals shall not relieve the contractor of the responsibility for achieving the desired result of constructing sound soil-cement, free from defects, according to the specifications and plans, or as directed by the Engineer. Changes in the source(s) of cement or fly ash will not be permitted without the prior approval of the Engineer.

(B) Preparation of Subgrade:

Before placement of the soil-cement, the area to be treated shall be graded and shaped to the lines and grades as shown on the plans. The subgrade shall be compacted to a

minimum of 95 percent of the maximum dry density determined in accordance with Arizona Test Method 225. The subgrade shall be compacted at a moisture content within two percentage points of the optimum moisture content determined in accordance with Arizona Test Method 225.

When the embankment material is composed predominantly of rock such that these compaction control procedures will not indicate the density achieved, the Engineer will determine the amount of compaction required and the adequacy of equipment used in obtaining the required compaction. Immediately prior to placement of the soil-cement mixture, the subgrade within the lines and grades of the plans shall be moistened and any soft or yielding subgrade shall be corrected and made stable before construction proceeds in accordance with requirements of Subsection 203-5.03(A) of the specifications. Any additional subgrade reparations required outside of the lines and grades shown on the plans, as determined by the Engineer, shall be repaired by the contractor and paid for by Force Account.

(C) Mixing Plant:

Aggregate and cementitious materials for the soil-cement shall be proportioned and mixed in a central mixing plant. The mixing plant shall be either of the batch-mixing type using revolving blade, rotary drum mixers, or of the continuous mixing type using a stationary twin shaft pug mill mixer. The aggregate, fly ash, and cement shall be proportioned by weight. The mixing plant shall be designed, coordinated, and operated to produce a soil-cement mixture of the proportions specified within required tolerances.

If the soil-cement temperatures measured at the mixer are 85 degrees Fahrenheit or less, the placing and compaction shall be completed within 1-1/2 hours of the batch time. If soil-cement temperatures measured at the mixer are greater than 85 degrees Fahrenheit but less than 96 degrees Fahrenheit, placing and compaction shall be completed within 1 hour of the batch time. If soil-cement temperatures are 96 degrees Fahrenheit or greater when measured at the mixer, the contractor shall take immediate steps to lower the batch plant mix temperature to 95 degrees Fahrenheit or below, and follow the above time limits as mix temperature dictates, prior to further placement and compaction of soil-cement materials.

The water shall be proportioned by weight or volume and there shall be means by which the Engineer may readily verify the amount of water utilized per batch or the rate of water flow utilized for continuous mixing.

(1) Measuring Devices:

The mixing plant shall record the quantity of the material, shall have a digital readout, and shall provide daily printed record such that the total discharged quantity per hour and the cumulative total quantity are displayed.

Measuring devices shall be calibrated and approved by the Engineer.

Each weight measuring device shall be calibrated to an accuracy of 0.2 percent and shall be inspected and calibrated as often as the Engineer deems necessary to assure their accuracy.

Each volume measuring device shall be calibrated to an accuracy of ± 1.5 percent and shall be inspected and calibrated as often as the Engineer deems necessary to assure their accuracy.

(2) Batch Mixing:

The mixer shall be equipped with a sufficient number of paddles of a type and arrangement to produce a uniformly mixed batch. The mixer shall be equipped with a timing device which will indicate, by a definite audible or visual signal, the expiration of the mixing period. The device shall be accurate to within two seconds. The allowable tolerance for weight batching of aggregates and cementitious material shall be two percent and 0.5 percent, respectively, for each batch.

The batch mixing plants shall provide sampling facilities which are satisfactory to the Engineer and which allow representative samples of the soil-aggregate mixture prior to the addition of water and cementitious material to be obtained easily and safely. Samples of the soil-aggregate will be taken at this point to determine conformance to the gradation and plasticity requirements listed in Subsection 913-2.02(B) of the specifications.

(3) Continuous Mixing:

Aggregates shall be drawn from the storage facility by a feeder or feeders which will continuously supply the correct amount of soil-aggregate in proportion to the cementitious material.

A control system shall be provided that will automatically close down the plant when material in any storage facility approaches the strike off capacity of the feed gate. The plant will not be permitted to operate unless this automatic control system is in good working condition. The feeder for the soil-aggregate shall be mechanically or electrically driven.

Continuous mix plants shall provide sampling facilities which are satisfactory to the Engineer and which allow representative samples of the soil-aggregate mixture prior to the addition of water and cementitious material to be obtained easily and safely. Samples of the soil-aggregate will be taken at this point to determine conformance to the gradation and plasticity requirements listed in Subsection 913-2.02(B) of the specifications.

(4) Blending of Cement and Fly Ash:

The blending procedure shall be sufficient to provide a uniform, thorough, and consistent blend of cement and fly ash. The blending method and operation shall be approved by the Engineer prior to the commencement of soil-cement production. During blending of the cementitious materials, the percent of fly ash content shall not vary by more than ± 0.5 percent of the content approved by the Engineer.

Weight measuring devices are required at both the cement and fly ash feeds. At the direction of the Engineer, an additional measuring device may also be required when the cement and fly ash are pre-blended at the site. In the production of the soil-cement mixture, the percent of cementitious material shall not vary by more than ± 0.5 percent of the contents approved by the Engineer.

Silos and feeders shall be equipped and operated so as to provide uniform rates of feed and prevent caking. The charge in the batch mixer or rate of feed to the continuous mixer shall not exceed that which will permit complete mixing of all the mix material. Provisions shall be made to allow for ready sampling of the cementitious materials.

(D) Transporting, Spreading, and Compaction:

The soil-cement mixture shall be transported from the mixing plant to the construction site in clean hauling equipment vehicles outfitted with suitable covers to protect the mixture in unfavorable weather.

Spreading of the soil-cement mixture shall be accomplished using equipment that will produce uniform layers of the width and thickness necessary to provide for adequate compaction in conformance with the required dimensions shown on the plans for completed soil-cement layers. Where the soil-cement is to be placed in confined areas, the lifts may be spread by other methods as approved by the Engineer.

The layers of soil-cement shall not exceed 12 inches after compaction, or be less than four inches thick after compaction, unless the contractor can demonstrate the ability to place thicker layers with the equipment being utilized in the control strip. If potholing is performed to allow testing of each lift, the recompacted material used to repair the pothole shall also be tested and meet the requirements of this specification. Each successive layer shall be placed as soon as practicable after the preceding layer is completed, and approved by the Engineer. The maximum depth of compacted soil-cement that shall be placed per day in each location is four feet, unless approved by the Engineer.

Prior to spreading new material on a previously compacted lift which has cured for more than 1-1/2 hours, or if the surface has dried due to temperature and/or wind effects, scarification of the lift shall be performed parallel with the direction of placement using equipment approved by the Engineer. The scarification shall be performed to a depth of at least two inches, spaced between 18 and 24 inches. The Engineer may waive

requirements for scarification if compaction is performed by means which provide an appropriate surface for bonding with the subsequent layer.

All construction equipment, including water spray trucks, shall be restricted from entering scarified surface areas during the interim between spreading and compaction operations.

If the surface cannot be scarified, the surface shall have cement grout slurry applied to ensure a proper bonding between lifts. The cement slurry shall have a water/cement ratio between 0.70 and 0.80 and be approved for use by the Engineer prior to placement of any additional soil-cement mixture.

All soil-cement surfaces that will be in contact with succeeding layers of soil-cement shall be kept continuously moist by fog spraying until placement of the subsequent layer, provided that the contractor will not be required to keep such surfaces continuously moist for a period longer than seven days. Mixing and placing shall not proceed when the soil-aggregate or the area on which the soil-cement is to be placed is frozen. Soil-cement shall be mixed and placed when the air is at least 40 degrees Fahrenheit and rising.

(E) Monitoring Moisture Content in the Field:

Control of water content by the contractor in the field shall be accomplished in two ways:

- (1) The moisture-density relationship for the soil-cement mixture shall be determined in accordance with Arizona Test Method 221 on a routine basis, or when any significant gradation shift or rock content change occurs.
- (2) The actual moisture content of the mixture at the time of compaction, or shortly thereafter, shall be determined in accordance with Arizona Test Method 235 to determine if the optimum moisture content as determined by Arizona Test Method 221 is being maintained. The water content in the soil-cement mixture is to be continuously monitored, and the mixing water shall be adjusted at the plant as necessary to achieve the compressive strength and compaction requirements specified herein.

(F) Quality Control Compaction Testing:

Soil-cement shall be uniformly compacted to a minimum of 98 percent of the maximum dry density determined in accordance with Arizona Test Method 221. A running average of five consecutive in place density tests shall not be less than 100 percent of maximum density as monitored by nuclear density tests in accordance with Arizona Test Method 235. Compaction shall be performed within 2 percentage points of the

optimum moisture content as determined in accordance with Arizona Test Method 221. Quality control density and moisture tests shall be performed in accordance with Arizona Test Method 235 at a minimum frequency as specified in table 4:

Table 4	
Quality Control Minimum Requirements for Compaction	
Moisture/Density	1 test / 500 sy/lift

(G) Control Strips:

A control strip shall be constructed at the beginning of work on the soil-cement to be compacted. The control strip construction shall be required to establish equipment and procedures required to attain densities for the specified course.

Each control strip, constructed to acceptable density and surface tolerances shall remain in place and become a section of the completed embankment. Once control strip is complete and accepted, production may begin on the same shift for the remainder of project.

Unacceptable control strips shall be corrected or removed and replaced at the contractor's expense. A control strip shall have an area of approximately 100 square yards and shall be of the same depth specified for the construction of the course which it represents.

The materials used in the construction of the control strip shall conform to the specification requirements. They shall be furnished from the same source and shall be of the same type used in the remainder of the course represented by the control strip. The underlying surface upon which a control strip is to be constructed shall have prior approval of the Engineer.

The equipment used in the construction of the control strip shall be approved by the Engineer and shall be of the same type and weight to be used on the remainder of the course represented by the control strip.

Compaction of control strips shall commence immediately after the course has been placed to the specified thickness, and shall be continuous and uniform over the entire surface. Compaction of the control strip shall be continued until no discernable increase in density can be obtained by additional compaction effort.

Upon completion of the compaction, the mean density of the control strip will be determined by averaging the results of ten nuclear density tests taken at randomly selected sites within the control strip.

If the mean density of the control strip is less than 100 percent of the density of laboratory compacted specimens as determined by testing procedures appropriate for the material being placed, the Engineer may order the construction of another control strip.

A new control strip may also be ordered by the Engineer or requested by the contractor when:

- (1) A change in the material or mix design is made.
- (2) A control strip density is not representative of the material being placed.

(H) Power Tampers and Small Vibratory Rollers:

Small vibratory rollers which are capable of operating within 6 inches of a vertical face shall be used for compaction adjacent to the guide banks, next to the utilities and drainage conduit; at transitions to constructed levee protection, and at other areas where larger vibratory rollers cannot maneuver. The amount of rolling and tamping required shall be whatever is necessary for the particular equipment to provide the same degree of compaction as would be attained with larger self-propelled vibratory rollers. Standby replacement equipment shall be available within 1 hour if needed.

(I) Finishing/Trimming:

After compaction, the soil-cement shall be further shaped, if necessary, to the required lines, grades, and cross-sections and rolled to a reasonably smooth surface. Shaping of the face of the soil-cement bank protection shall be conducted daily at the completion of each day's production.

The exposed face of the soil-cement bank protection shall be trimmed to a neat line as shown on the plans. The resulting soil-cement bank protection width shall not be less than 8 feet after trimming unless specified on the plans.

(J) Curing:

Whenever the atmospheric temperatures are expected to drop below 30 degree Fahrenheit, the soil-cement shall be protected from freezing for seven days, after its construction by a covering of straw, earth, or other suitable material approved by the Engineer.

Temporarily exposed surfaces shall be kept moist as previously set forth. Care must be exercised to ensure that no curing material other than water is applied to the soil-cement surface that will be in contact with succeeding layers.

Permanently exposed surfaces shall be kept in a moist condition for seven days, or they may be covered with bituminous curing material, subject to the Engineer's approval. Any damage to the protective covering within seven days shall be repaired to the satisfaction of the Engineer at no additional cost to the Department.

Regardless of the curing material used, the permanently exposed surfaces shall be kept moist until the protective cover is applied. Such protective cover is to be applied as soon as practicable, with a maximum time limit of 24 hours between the finishing of the surface and the application of the protective cover or membrane.

(K) Backfill:

Backfill shall not be placed against the soil-cement until the contractor has achieved the compaction requirement.

(L) Maintenance:

The contractor shall maintain and protect the soil-cement in good condition until all work is completed and accepted. Maintenance shall include immediate repairs of any defects that may occur. This work shall be done at no cost to the Department and repeated as often as necessary. Faulty work shall be replaced for the full depth of the layer. The contractor shall take all necessary precautions to avoid damage to the completed soil-cement by equipment, and to avoid the deposition of raw earth or foreign materials between layers of soil-cement. Where ramps are constructed over soil-cement layers which are not to grade, all foreign materials and the uppermost one inch of the previously placed soil-cement mixture must be removed prior to continuation of the soil-cement construction.

(M) Construction Joints:

Construction joints are to be provided at the end of each day's work or when work is to be halted for 90 minutes or more. The joints shall be trimmed to a 15 degree minimum skew, transverse construction joint shall be formed by cutting back into the completed work to form a vertical face to the full depth of the previous lift. Before resuming placement of new material, the joints shall be roughened and loose material shall be removed by power broom.

(N) Acceptance of Soil-Cement:

The Engineer will cast, transport, cure, and test specimens in accordance with Arizona Test Method 241 for each 1,500 cubic yards of soil cement placed. Three cylinders will be tested at seven days. The average compressive strength of the three cylinders shall achieve a minimum compressive strength of 750 psi.

Any early strength testing for the purpose of correlating seven day strength results to provide an early indicator of potentially low strength material shall be the responsibility of the contractor.

913-4 Method of Measurement:

Riprap, except gabions and sacked concrete, will be measured by the cubic yard of protection constructed by computing the surface area measured parallel to the protection surface and the total thickness of the riprap measured normal to the protection surface.

Riprap (gabions) will be measured by the cubic yard by computing the volume of the rock-filled wire baskets used.

Riprap (sacked concrete) will be measured by the cubic yard of concrete placed in the completed work. The measurement will be based on mixer volumes.

Rail bank protection will be measured by the linear foot. Measurement will be made from top of rail to top of rail (longest rail where rails of two or more lengths are used) and the distance measured will be from end rail to end rail.

Where two parallel rows of vertical rails are used, the measurement for payment will be the average of the distance along the two rows. Rail bank protection will be measured along the bank protection control line from end rail to end rail.

Soil-cement will be measured per cubic yard of soil-cement furnished and placed per the specified lines, grades, and cross-sections shown on the plans.

913-5 Basis of Payment:

The accepted quantities of riprap and rail bank protection, measured as provided above, will be paid for at the contract unit price per cubic yard or linear foot, which price shall be full compensation for the work, complete in place, including excavation; preparing the ground area; furnishing and installing the rock, filter fabric, bedding material, metal items, concrete, sacks and grout; and backfilling as required.

Materials, labor and equipment necessary to perform additional work such as jetting or drilling, as specified under Subsection 913-3.01(H) of the specifications, will be paid for in accordance with the provisions of Subsection 109.04 of the specifications.

The accepted quantities of soil-cement, measured as provided above, will be paid for at the contract unit price per cubic yard of soil-cement bank protection. Such payment shall constitute full reimbursement for all work necessary to complete the soil-cement bank protection including:

- (1) Surface Preparation;
- (2) Providing and Stockpiling Soil-Aggregate;
- (3) Cementitious Material, Watering, Mixing;
- (4) Placing;
- (5) Compacting;
- (6) Shaping and Finishing;
- (7) Curing;
- (8) Quality Control Testing; and
- (9) Other Incidental Operations.

Any waste and non-compacted soil-cement material not used on the final soil-cement bank protection will not be measured for payment.

Excavation and backfill associated with the soil-cement construction will be measured and paid under the Structural Excavation and Structure Backfill items respectively.

Construction of Gabion Mattress associated with the soil-cement work will be measured and paid under the Riprap (Gabion Mattress) item.

Payment for additional excavation, where determined by the Engineer to remove unsuitable material, per the requirements of Subsection 203-5.03(A) of the specifications, will be made in accordance with the provisions of Subsection 109.04 of the specifications.

Payment for Dewatering will be made on a Force Account basis in accordance with the requirements of Subsection 109.04 of the specifications.

(923OJTNG,06/18/26)

SECTION 923 BLANK: the title and text of the Standard Specifications is revised to read:

SECTION 923 ON-THE-JOB TRAINING WITHOUT GOALS:

923-1 Description:

The contractor may provide On-The-Job training (OJT) aimed at moving minorities, women, and disadvantaged trainees into journeymen in various types of construction trades or job classifications in accordance with 23 CFR Part 230, Part 230.111 and Part 230, Appendix B.

It is the intention of these Special Provisions that training be provided in the construction classifications/crafts rather than for office support positions. Some off-site training is permissible as long as the training is an integral part of an approved training program and does not comprise of a significant part of the overall training.

923-1.01 General:

Training and upgrading of minorities and women toward journeyman status is the primary objective of these Special Provisions. Accordingly, the contractor shall make every effort to enroll minority, women, and disadvantaged trainees (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 it has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with these Special Provisions. 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.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. 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. The ratio of apprentices and OJT Trainees to journeymen shall not be greater than permitted by the terms of the approved training program being utilized.

No employee shall be employed as a trainee in a classification in which they have successfully completed a training course leading to journeyman status, or in which they have been employed as a journeyman. The contractor shall satisfy this requirement by including appropriate questions in the employment application or by other suitable means. The contractor shall maintain documentation that shows the employee's work and training history.

923-1.02 Definitions:

Banking-Carryover Hours:

OJT hours completed by a trainee are eligible to be credited to a future project. Banked-Carryover hours will only be credited when the same trainee that completed the excess hours is used on the future project.

Classification/Craft:

Type of occupational category, trade, or job being done by a trainee on a federal-aid funded highway construction project.

Disadvantaged Persons:

A person who meets one of the following:

- (1) Receives, or is a member of a family and/or household, which receives cash payments under a Federal, State, or local income-based public assistance program;
- (2) Is a member of a family and/or household that receives (or has been determined within the 6-month period prior to registration for the program involved to be eligible to receive) Food Stamps/EBT card under the Food Stamp Act of 1977;
- (3) Is a foster child on behalf of whom State or local government payments are made;
- (4) Does not have a high school diploma or GED; or
- (5) Is from a family whose total annual household income is below the federal poverty limits.

Journeyman:

A person who is capable of performing all the duties within a given job classification or craft.

OJT Trainee:

A person who is:

- (1) A minority, woman, or disadvantaged individual enrolled in an approved training program; or
- (2) Any other individual enrolled in an approved training program, whose training hours are, approved by the Department, and can be credited as OJT hours.

Small Business and Workforce Development (SBWD):

SBWD is responsible for oversight of the OJT program, which targets under-represented segments of the U.S. workforce, including minorities, women and disadvantaged individuals. SBWD assesses OJT hour goals on contracts and monitors them to ensure that trainees receive the required number of training hours.

923-1.03 Computation of Time:

In computing any period of time described in this OJT special provision, 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 Department's offices are closed for all or part of the last day, the period extends to the next day on which Department's offices are open.

923-1.04 OJT Training Programs:

The minimum length and type of training for each classification will be established in the training program selected by the contractor and approved by the Department and FHWA. The Department and FHWA will approve a program if it is reasonably calculated to meet equal employment opportunity obligations and qualifies the average trainee for journeyman status in the classification concerned by the end of the training period as defined in the training program.

The Department recognizes the following OJT Training programs:

- (A) OJT Programs approved by FHWA or the Department of Labor (DOL) prior to the start of the trainee commencing work.
- (B) Registered union or other approved apprenticeship programs registered with the Bureau of Apprenticeship, U.S. DOL, Employment and Training Administration, Bureau of Apprenticeship and Training or the Arizona Apprenticeship Office, Arizona Department of Economic Security programs recognized by the Bureau.

Approval of a training program other than those specified above to be used for the contract must be approved by the Department or FHWA prior to the trainee commencing work on the classification covered by the program. Contractors intending to submit a training program for approval prior to the start of a contract must submit the program as soon as possible after notification of contract award as approval of a training program may take up to four weeks. Several FHWA approved training program templates for specified classifications are available on the SBWD website.

The contractor shall furnish each trainee with a copy of the Training Program the trainee is enrolled in, and other documentation related to the training program. The contractor shall provide training that develops the skills outlined in the training program. Multiple OJT training programs can be used on the project.

All training programs shall be administered in a manner consistent with the equal employment obligations of federal-aid highway construction contracts. The Department reserves the right to request documentation that the contractor's training program fulfills these obligations.

The trainee will be paid the appropriate trainee Davis-Bacon wage rates for training classifications/crafts on federally-funded projects. The contractor shall compensate trainees not less than the rate outlined in the approved training program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination.

The contractor shall provide for the maintenance of records and furnish/submit required information and reports documenting its performance under these Special Provisions. Such records shall be available at reasonable times and places for inspection or review by the Department and FHWA.

923-1.05 OJT Liaison:

The contractor shall designate an OJT Liaison who shall be responsible for monitoring and administering the contractor's OJT Program and monitoring the trainees' progress. The OJT Liaison may have other responsibilities for the contractor. The OJT Liaison shall serve as the point of contact for the Department regarding information, documentation, and conflict resolution relating to the contractor's OJT program.

923-2 Online Resources:

OJT System Website:

<https://adot.dbesystem.com>

SBWD Website:

<https://azdot.gov/business/small-business-and-workforce-development>

923-3 Requirements:

923-3.01 Documentation:

Documentation related to OJT training can be found on the Department's SBWD website. The contractor shall complete and submit the following information to the Department:

(A) OJT Enrollment and Progression:

(1) OJT Enrollment:

OJT Enrollment information shall be submitted through the Department's online OJT System by the contractor at least 5 days prior to a trainee's start date. OJT Enrollment information shall be completed and includes the trainee's name and address, employment status, gender and ethnicity, training program (s), and classification/craft.

SBWD will review the OJT Enrollment information within 5 days, and if approved, hours will be retroactively credited to the date the OJT Enrollment information is received by SBWD.

To receive OJT credit, apprentice's current apprentice certificate or proof of registration from a union or approved apprenticeship program shall be uploaded into LCPtracker by the contractor within 5 days of the apprentice's start date, in addition to completing the OJT enrollment information in the online OJT System.

If the Arizona Apprenticeship Office Representative's signature is missing from the apprentice certificate, the contractor shall also upload the apprentice's US Department of Labor, Office of Apprenticeship Certificate to LCPtracker. The contractor shall not receive training credit or reimbursement until the certificate is uploaded.

(2) Progression of Training and Change of Status:

Progression of Training-Level Up and Change of Status shall be submitted through the Department's online OJT System each time a trainee advances, progresses to another training level or milestone in his/her training program, or has a change of job classification. Hours will be retroactively credited to the date the information is received.

Hours that exceed the maximum indicated in the program for a certain level will not be credited. Once a level is completed, the trainee should be moved to the next level towards journeymen status.

923-3.02 Training Program Completion:

Once the trainee completes the required number of levels and hours of training for the same classification or craft, or completes an approved training program, the trainee is considered to have completed the training program it is enrolled under. The contractor shall not receive OJT credit for hours exceeding the maximum number of training hours required for completion of the selected training program.

Once a trainee completes a specific training level for a classification or craft, the contractor shall not be permitted to submit that trainee for enrollment or reimbursement at that same level within the same classification or craft, however the same trainee can be enrolled in a different classification or craft.

The contractor shall provide documentation showing the type and length of training satisfactorily completed to each trainee and the Department upon successful completion of a training program.

For an apprenticeship program, the Apprenticeship office will issue a certificate of completion in said craft, a DOL certificate, and a journeyman's card.

923-3.03 Banking-Carryover Hours:

At the completion of the project, the contractor may submit a Banking-Carryover Hours request in the Department's online OJT System, to carryover training hours for a specific trainee on the project to be used on a future project. Banked hours that are carried over to a project may lower the required number of training hours the contractor is required to complete on that project. The trainee shall be placed on a subsequent project with the intent that the trainee is progressing towards completion of a training program. Banked hours cannot be transferred to other trainees. No additional payment will be paid for banked hours carried over to other projects.

923-3.04 OJT Project Completion and Banked Hours Request:

OJT Completion and Banked Hours documentation shall be submitted within 60 days of completion of training. Any hours to be banked shall be shown on the documentation.

923-4 Method of Measurement:

OJT training hours will be measured by the hour to the nearest half hour.

Measurement of hours will be made as the OJT trainee completes hours on the project. Hours are considered complete if the trainee performs hours on the project, is OJT enrolled, and provides required training by the program.

No measurement for payment will be made for trainee hours in which OJT enrollment information has not been received and approved by the Department.

923-5 Basis of Payment:

The accepted quantities of hours, measured as provided above, will be paid for at a unit price of \$3 per hour for training provided to trainee/apprentice in accordance with an approved training program.

Payment for offsite training may only be made when the contractor does one or more of the following and the trainees are concurrently employed on a federal-aid project;

- (A) Contributes to the cost of the training,
- (B) Provides the instruction to the trainee
- (C) Pays the trainee's wages during the offsite training period.

923-6 Monitoring:

(A) Monthly Reporting:

Contractors shall report monthly hours for each trainee in the online OJT System by the 15th of the month following the month of training hours completed.

(B) Site Visits:

The Department may conduct periodic monitoring site visits to the worksite to review OJT Program compliance, during working hours on the project. The Department will notify the OJT liaison at least 24 hours prior to a site visit if the OJT Liaison is required to be at the site visit. The site reviews may include, among other activities, interview of trainees, the contractor, and its employees. The contractor shall cooperate in the review and make its employees available. The contractor's OJT Liaison shall be reasonably available to meet with Department staff as well as be available to respond to periodic emails and phone calls from the Department to check on the progress of OJT Trainees. The Department will make efforts to ensure minimal disruption to the work and coordinate site visit times with other Department divisions, as applicable (for example, Davis-Bacon interviews).

ITEM 9240010 - FORCE ACCOUNT WORK (BIOLOGIST):

Description:

The work under this item shall consist of hiring a qualified biologist holding a permit from the US Fish and Wildlife Service to conduct active bird nest surveys within the project limits.

Construction Requirements:

The contractor shall completely remove all existing swallow nests within 100 feet of work areas after August 31 but prior to February 1 to prevent swallows from reusing those nests.

If swallow exclusion measures fail, the contractor shall hire a qualified biologist to survey bird nests within 100 feet of construction areas and provide a report to the Environmental Planning biologist (602.341.9331) with the number of affected nests for each species of bird. The resume for the selected biologist shall be approved by the Engineer in coordination with the ADOT Biologist prior to conducting the survey.

If clearing, grubbing, or tree/limb removal will occur between March 1 and August 31, the contractor shall employ a qualified biologist to conduct a migratory bird nest search of all vegetation within the 10 (ten) days prior to removal. Vegetation may be removed if it has been surveyed and no active bird nests are present. If active nests cannot be

avoided, the contractor shall notify the Engineer to evaluate the situation. During the non-breeding season (September 1 – February 28), vegetation removal is not subject to this restriction.

Method of Measurement and Basis of Payment:

Force Account Work (Biologist) will be made on a Force Account basis in Accordance with the requirements of Subsection 109.04(D) of the specifications.

ITEM 9240119 - MISCELLANEOUS WORK (ADJUST WATER VALVES TO FINISHED GRADE):

Description:

The work under this item shall consist of all equipment, materials and labor to adjust the water valves and boxes at the locations shown on the project plans.

Construction Requirements:

During construction, the contractor shall carefully rotate the valve box to the required finished grade as shown on the project plans or as directed by the Engineer. See Tucson Water Standard Detail SD-300, included in the project plans.

Method of Measurement:

Adjust Water Valves to Finished Grade shall be measured per each.

Basis of Payment:

The accepted quantities of Adjust Water Valves to Finished Grade will be paid for at the contract price each, which shall be full compensation for the item complete as described and specified herein and on the project plans.

ITEM 9240129 - MISCELLANEOUS WORK (CONCRETE EMBEDDED RIPRAP) (DETAIL E):

Description:

The work under this item shall consist of furnishing all materials and constructing hand placed riprap embedded in concrete at the locations shown in the project plans, and in accordance with the requirements of Detail E of the project plans and these specifications.

Materials:

Concrete shall be Class B ($f'_c = 2,500$ psi) and shall conform to the requirements of Section 1006 of the specifications.

Light Tan, Fractured-Face Riprap shall be used for the riprap and shall have a minimum size of 4 inches and a maximum size of 8 inches subject to approval of the Engineer. Rock type shall be determined by the rock availability. The rock shall be free of calcareous coating, caliche, organic matter or other foreign substances.

Construction Requirements:

The surfaces on which the concrete embedded riprap is to be placed shall be finely graded to the lines and grades shown on the project plans and in accordance with the requirements of Section 203 of the specifications. The surface shall be thoroughly compacted to a density of not less than 95 percent of the maximum density as determined in accordance with the requirements of the applicable test methods of the ADOT Materials Testing Manual, and shall be uniformly moistened so that water will not be drawn from the freshly placed concrete.

Concrete shall be placed in accordance with the requirements of Section 601 of the specifications. The riprap shall be hand-placed and embedded into the concrete in accordance with the requirements of Detail E of the project plans.

Method of Measurement:

Concrete Embedded Riprap (Detail E) will be measured by the square yard.

Basis of Payment:

The accepted quantities of Concrete Embedded Riprap (Detail E), measured as provided above, will be paid for at the contract unit price per square yard, which price shall be full compensation for the work, complete in place, including excavation, backfill, fine grading, welded wire fabric and riprap.

ITEM 9240144 - MISCELLANEOUS WORK (POST AND CABLE BARRIER) (DETAIL D):

Description:

The work under this item shall consist of furnishing all labor, equipment and materials to construct the post and cable barrier at the locations shown in the project plans and in accordance with the requirements of Detail D of the project plans and these Special Provisions.

Materials:

Certificates of Compliance conforming to the requirements of Subsection 106.05 shall be submitted.

Posts: Posts shall be Schedule 40 black steel pipe. Pipe size shall be as detailed or noted in the project plans.

Post Caps: Post caps shall be malleable steel caps and shall be welded to the posts or secured in a manner approved by the Engineer.

Cable: Cable shall be ½" diameter, 6 x 25 galvanized steel wire rope cable. Cable shall be new.

Cable Clamps: Cable clamps shall be heavy duty steel cable clamps with not less than two bolts per clamp.

Concrete shall conform to the requirements of Section 922 of the specifications.

Paint: Posts and post caps shall be powder-coated with a Super-Durable TGIC Polyester material. The contractor shall submit one set of color chips illustrating the colors available for the powder-coating of the structure's frame. Color shall be Dunn Edwards "Adobe" DEC726 or approved equal.

Construction Requirements:

Post Installation: The contractor shall install posts as detailed. The contractor shall allow adequate time for concrete to set before installing cable.

Cable: The contractor shall install cable as detailed and tension to provide a sag of not more than 4" when cable is loaded between posts. The contractor shall wrap cable around terminal posts and secure with three (3) cable clamps.

Splicing Restrictions: Cable shall terminate at end post only. The splicing of cable between end posts is prohibited.

Surface Preparation: The contractor shall clean all rust, scale, and other foreign material from the surface of the completed fabrication prior to the application of powder coating. The contractor shall perform other surface preparation work as recommended by the powder coat manufacturer.

Powder Coating: The contractor shall apply powder coating to prepared metal surface in accordance with AAMA Specifications 2603, 2604, and 2605, as applicable. Thickness of powder coat shall be 2 mil, minimum.

The contractor shall perform the welding in accordance with the requirements of the current edition of the American Welding Society, Structural Welding Code, D1.1. All butt welds on exposed surfaces shall be ground flush with adjacent surfaces.

The contractor shall submit shop drawings in accordance with Subsection 105.03 of the specifications, showing complete details.

The contractor shall furnish complete copies, in triplicate, of all mill reports on steel materials.

Method of Measurement:

Post and Cable Barrier (Detail D) will be measured by the linear foot.

Basis of Payment:

The accepted quantities of Post and Cable Barrier (Detail D), measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for all work, complete in place.

**ITEM 9240181 MISCELLANEOUS WORK (CONTROL OF NOXIOUS PLANTS)
(MANUAL / MECHANICAL METHODS):**

**ITEM 9240182 MISCELLANEOUS WORK (CONTROL OF NOXIOUS PLANTS)
(HERBICIDE):**

Description:

The work under these items shall consist of surveying, as well as controlling noxious and invasive plant species manually / mechanically and/or with the application of herbicides in the areas designated by the Engineer throughout the duration of the contract, as required in a Noxious Species Control Plan (NSCP) prepared by the contractor as specified herein. When noxious or invasive plant species are determined to be present within the project limits or all anticipated construction zones, the control procedures in the NSCP shall be implemented with the approved weed management measures achieved prior to earth-moving activities in infested areas.

Weed control procedures in the NSCP shall also be implemented during all stages of construction and in advance of seeding. Control of Noxious Plants through herbicide methods shall be accomplished between fourteen (14) and twenty-one (21) calendar days prior to Clearing and Grubbing, as well as construction excavations. Control of Noxious Plants through manual / mechanical methods shall be accomplished within seven (7) calendar days prior to Clearing and Grubbing, as well as construction excavations. Repeated treatments shall resume after Clearing and Grubbing when noxious/invasive plants occur during construction. In addition, all construction-related equipment, materials, and personnel moving in and/or out of the project site shall be inspected and cleaned of noxious and invasive plant species (seeds, seed heads / pods) at no additional cost to the Department.

For projects that include Landscape Establishment, as specified in Section 807 of the Standard Specifications and these Special Provisions, control of noxious and invasive plant species will also be required throughout the Landscape Establishment phase, and shall be included in the contractor's NSCP.

The contractor shall conduct repeated applications for Control of Noxious Plants throughout the entire contract time including the Landscape Establishment phase when noxious/invasive plants occur. Successive treatments along with multiple mobilizations for Control of Noxious Plants shall be conducted in accordance with invasive weeds' growing seasons at no additional cost to the Department.

The control of plant species not on the State or Federal Noxious or Invasive lists – especially Forest Service Regional/BLM lists noted below – will be paid only when control is directed by the Engineer based on the original or amended NSCP approved by an ADOT construction Professional Landscape Architect (PLA) licensed in the State of Arizona.

The areas to be designated by the Engineer for Control of Noxious Plants shall be coordinated with an ADOT construction PLA. Unless the project site presents sizable monocultures or pure stands of high-density noxious and invasive plant species, the contractor shall not perform broadcast applications of glyphosate and/or other broad-spectrum non-selective herbicides within the project limits. Spot-treating of identified noxious and invasive plant species patches with appropriate selective herbicides shall be conducted.

For unpaved project areas that will ultimately be seeded with desirable native plant species, the contractor shall avoid persistent herbicide residue contamination in the soil. The application of plant growth regulator (PGR) herbicides including Pyridine Carboxylic Acid (PCA) herbicides, which do not break down easily, shall be approved by the Engineer in accordance with an ADOT construction PLA's evaluation. Soil sterilant herbicides, especially bare-ground herbicides with long-lasting soil persistence, shall be prohibited for use in all unpaved project areas that will be seeded. Soil sterilant herbicides including bare-ground herbicides shall be prohibited for use in all unpaved and/or unstabilized project areas that are prone to soil erosion and/or dust emission.

Pre-emergence herbicides shall be prohibited for use in unpaved project areas that will eventually be seeded.

All glyphosate, as well as formulations of glyphosate-based herbicides and/or such products under the brand name / trade name of Roundup shall be cautiously evaluated for use by an ADOT construction PLA and approved by the Engineer in accordance with environmental commitments, along with site-specific concerns regarding sensitive biological resources for native species and habitats.

The selection of appropriate treatment method(s) between herbicide versus manual/mechanical or in combination shall be proposed by the contractor within NSCP and approved by an ADOT construction PLA through the Engineer consistent with type(s), life stage(s), growing season(s), and existing condition(s) of plant species, as well as environmental commitments. The contractor may apply the herbicide method to exterminate noxious plants first and remove the dead noxious plants by using the manual / mechanical method after herbicide treatment is successful. Clearing and Grubbing shall not be applied to remove the dead noxious/invasive plants, as well as contaminated soil seed bank if the method will spread the reproducible components of noxious/invasive plants. The manual / mechanical method shall be applied instead. The reproducible components of noxious/invasive plants shall include, but are not limited to roots, stems, seeds, seed heads, or seed pods according to various types and life stages of plant species.

Materials:

General

The contractor shall accurately follow all applicable herbicide label requirements and prevent adverse environmental effects. The herbicides to be used and the methods of application shall conform to US Environmental Protection Agency (EPA), Arizona Department of Agriculture, and/or Arizona Department of Environmental Quality (ADEQ) requirements, and the product's label instructions, as approved by the Engineer. If herbicides are to be applied to potential or delineated Waters of the US as defined under Section 404 of the Clean Water Act, the contractor shall file a Notice of Intent (NOI) and Notice of Termination (NOT) to EPA and/or ADEQ for compliance with the National Pollutant Discharge Elimination System (NPDES) Pesticide General Permit and/or Arizona Pollutant Discharge Elimination System (AZPDES) Pesticide General Permit (PGP).

All herbicides used on the project, including stump treatment herbicide(s), shall be in compliance with NPDES and/or AZPDES PGP(s). The PGP NOI(s) shall be filed for herbicide(s) utilized within the Ordinary High-Water Mark (OHWM) of Jurisdictional Waters of the U.S.

All materials to be used shall be listed and protocol information provided in the Noxious Species Control Plan, as specified below. The contractor shall provide the herbicides container with the original chemical label for inspection and confirmation of the chemicals used. All containers shall be disposed of as recommended by the manufacturer.

Herbicides proposed in the plan for use on projects within transportation easements on BLM and/or USFS Lands shall be in conformance with the following current environmental documents including: "Environmental Assessment for ADOT Herbicide Treatment Program on Bureau of Land Management Lands in Arizona", which is available at <https://eplanning.blm.gov/eplanning-ui/project/34810/510> or the "Environmental Assessment for Management of Noxious Weeds and Hazardous Vegetation on Public Roads on National Forest System Lands in Arizona" which is available at: <http://www.fs.usda.gov/main/r3/landmanagement/projects>. The Environmental Documents include a list of approved Herbicides, Mitigations and Best Management Practices (BMPs), which shall be included, as appropriate, by the contractor in the submitted NSCP.

Web links to environmental documents for noxious weeds and invasive plant species treatment for the six (6) National Forests within Arizona:

1. Final EIS (Environmental Impact Statement) and Record of Decision for Noxious Weed Treatment on the Coconino, Kaibab, and Prescott National Forests:
<http://www.fs.usda.gov/project/?project=30>
2. Coronado National Forest EA (Environmental Assessment) for Noxious Weed Treatments:
<http://www.fs.usda.gov/detail/coronado/landmanagement/resourcemanagement/?cid=stelprdb5123160>
3. Apache-Sitgreaves National Forest Integrated Forest-Wide Noxious Terrestrial and Aquatic Weed Management Plan:
<https://www.fs.usda.gov/project/?project=4967>
4. Tonto National Forest Integrated Treatment of Noxious and Invasive Weeds:
<https://www.fs.usda.gov/project/?project=4454>;
Additional information on invasive species requirements for the Tonto National Forest is available at:
http://www.fs.usda.gov/detail/tonto/landmanagement/resourcemanagement/?cid=fsbdev3_018789.

Arizona Department of Agriculture NOXIOUS WEEDS (under the authority of Arizona Revised Statutes, Administrative Code R3-4-244 Regulated and Restricted Noxious Weeds, as well as R3-4-245 Prohibited Noxious Weeds) web link:
<https://agriculture.az.gov/pestspest-control/agriculture-pests/noxious-weeds>

Furthermore, the USDA Southwestern Region Weed Field Guides web link is accessible below:

<https://www.fs.usda.gov/detail/r3/forest-grasslandhealth/invasivespecies/?cid=stelprd3813522>

The USDA New Invaders of the Southwest is attainable within the web link below:

<https://docslib.org/doc/7815112/new-invaders-of-the-southwest>

The USDA Field Guide for Managing Buffelgrass in the Southwest is obtainable through the web link below:

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd563017.pdf

All materials used shall be in accordance with the approved NSCP and Pesticide Use Proposal (PUP).

Construction Requirements:

The contractor shall develop a NSCP for state and federal listed noxious and invasive plant species, and other undesirable plant species shown on the list posted on the Roadside Development web site (<https://azdot.gov/node/5372>), for approval by an ADOT construction PLA. Four (4) copies of the proposed NSCP in standard three (3) ring binders shall be submitted to the Engineer within seven (7) calendar days after the Execution of Contract. The ADOT construction PLA shall review and respond to the proposed NSCP within ten (10) calendar days upon receiving the submittal. If requested, additional copies may be submitted for review and comments by Native American Community governing body designated representative as approved by the Engineer. Native American Community governing body designated representative shall also review and comment the proposed NSCP within thirty (30) calendar days upon receiving the submittal. The contractor proposed NSCP shall include as minimum the following information applicable to the project area, location and conditions listed below:

- (1) A list of Noxious and Invasive Species and other Roadside Development approved plant species that would be anticipated for control based on existing vegetation and the project biotic communities. The weed species shall include but not be limited to the TABLE – I listed below:

TABLE – I	
Scientific Name	Common Name
<i>Convolvulus arvensis</i> (syn. <i>Convolvulus ambigens</i> / <i>Convolvulus incanus</i>)	Field Bindweed / Field Morning-Glory
<i>Ipomoea hederacea</i>	Ivyleaf Morning-glory
<i>Sorghum halepense</i> (syn. <i>Holcus halepensis</i> / <i>Sorghum miliaceum</i>)	Johnsongrass / Egyptian Millet / Morocco Millet

TABLE – I	
Scientific Name	Common Name
<i>Salsola kali</i> subsp. <i>tragus</i> (syn. <i>Salsola iberica</i>)	Russian Thistle / Tumbleweed

- (2) The methods of control of noxious and invasive plant species including herbicide stump treatment shall be determined based on the species present within the project limits prior to earth moving activities as well as subsequent project construction phases before seeding. Pre-emergent herbicide shall NOT be applied to all project seeding areas. The contractor shall provide information / methods on how the application of herbicides will NOT harm the expected desirable seed species germination and establishment as specified in Section 805 of these Special Provisions.
- (3) The proposed method(s) of control and extermination treatment between herbicide versus manual/mechanical or in combination to be utilized for each anticipated plant species suitable for the specific stage of plant development.
- (4) The herbicides, method and frequency of application, and rates to be used for each listed plant species.
- (5) Copies of herbicide and surfactant labels and Safety Data Sheet (SDS) for all chemicals proposed for use.
- (6) Procedure for collection, removal, containment, and disposal of noxious and invasive plants. All components of noxious and invasive plants such as roots, stems, leaves, flowers, seeds, seed heads, or seed pods shall be subject to collection, removal, containment, and disposal at no additional cost to the Department.
- (7) Methods and procedures to be followed to protect existing, transplanted, and new emerging vegetation in seeded areas.
- (8) Responsible Applicator and required Arizona Department of Agriculture Pest Management Division Licensing information, as specified in Section 806.
- (9) Record procedures to be followed to document control work completed.
- (10) Record procedures to be followed for reporting all chemicals used annually within transportation easements on BLM or USFS Lands within two (2) months or September 30th of each calendar year (whichever is sooner) to an ADOT construction PLA.

- (11) Projects on transportation easements on BLM or USFS Lands shall include a completed Pesticide Use Proposal (PUP) form for all proposed herbicide uses prepared for submittal to the appropriate BLM Field Office or National Forest for approval. An example of a completed PUP for the project area will be provided to the contractor for use in preparing their PUP upon request to the ADOT construction PLA.
- (12) Projects on transportation easements within Native Americans (Tribal) Land shall include a completed PUP form for all proposed herbicide uses prepared for submittal to the appropriate representative of tribal government (governing body) for approval. An example of a completed PUP for the project area will be provided to the contractor for use in preparing their PUP upon request to the ADOT construction PLA.
- (13) When applicable, other information and explanations are required in the PUP or to implement the NSCP.
- (14) Process to be used for amending the NSCP to add additional plants or treatments that may be required as the project progresses.
- (15) A copy of the original Special Provisions for Control of Noxious Plants that the contractor bid on shall be attached to the NSCP.
- (16) Plans and methods to protect Threatened and Endangered Species in accordance with the Environmental Mitigations section of the contract documents.
- (17) Plans and methods for controlling of noxious/invasive plants in riparian and aquatic areas:
 - I – Prevention of herbicide drifted by wind onto non-target native plants or nearby wetlands/watercourses by using low pressure systems and coarse-spray nozzles.
 - II – Safe and effective use of herbicide chemicals labeled for the vicinity of wetlands/watercourses in prevention of water quality contamination.

The NSCP submitted to the Engineer shall not be implemented until it is approved by an ADOT construction PLA, and the contractor is so directed by the Engineer.

The contractor shall keep a copy of the approved NSCP and furnish the Engineer a copy of the approved NSCP for record keeping. The NSCP copy of the contractor and Engineer shall be maintained up to date with the contractor providing submittals of completed work activities within five (5) working days following completion of the work for each area directed by the Engineer for control. The NSCP shall be maintained up to date with submittals of the above completed NSCP information for the duration of the project.

The Engineer in consultation with an ADOT construction PLA shall designate/approve the location of the areas to be treated, and when required the frequency of treatment as per the NSCP. Payment will be made for the initial treatment of each area, whether with manual / mechanical methods or using herbicides, and for each subsequent treatment ordered and approved by the Engineer.

The contractor shall document the location and size of the project treatment areas, as well as noxious and invasive plant species that have been treated by the end of each working day. Furthermore, the contractor shall mark up the project layout plans (engineering drawings) with location and size of the project treatment areas, as well as noxious and invasive plant species that have been treated. Such documentation shall be submitted to an ADOT construction PLA for inspection/evaluation through the Engineer.

The contractor shall begin control of the designated areas within ten (10) working days of the Engineer's notice and complete the treatment within fifteen (15) working days of the notice approved by the Engineer.

If other plant species listed in the Arizona Noxious Weed List, the Forest Service Regional/BLM lists, or the ADOT Invasive and Noxious Plant Species Lists (available electronically at the following Roadside Development web address:

<https://apps.azdot.gov/files/roadway-engineering/roadside-dev/adot-invasive-noxious-plant-species-list-for-construction-projects.pdf>) occur within the project

area that are not included in the NSCP, the contractor shall modify the Noxious Species Control Plan to add such species, including acceptable control measures and where applicable a PUP, and submit this information as an amendment of the NSCP to the Engineer and ADOT construction PLA for acceptance. No herbicide Control of Noxious Plants work shall be commenced on Federal lands until the PUP has been entirely completed and approved.

The project areas will be surveyed by an ADOT construction PLA, with the approval of the Engineer, prior to earthmoving activities and following rainfall events and during plant germination and growth periods for listed noxious and invasive plant species. To update NSCP, the contractor shall also furnish field inspection/observation reports for new growth of noxious/invasive plant species between four (4) weeks to six (6) weeks after each rainfall event of 0.5 inches (≥ 12.7 mm) or more. When surveys determine that noxious, invasive, or other designated plants species listed in the NSCP for control are found to be present within the project right-of-way, the contractor shall treat the areas designated by the Engineer in accordance with the approved NSCP. Such treatments shall be completed and approved by the Engineer before ground disturbing or earthmoving activities occur from those areas.

The contractor shall mark those areas receiving manual / mechanical control with an application of a photosensitive dye. Herbicides shall be mixed with a photosensitive dye which will produce a contrasting color when sprayed upon the ground. The color shall disappear between three (3) and five (5) days after being applied. The dye shall not

stain any surfaces nor injure non-target plant or animal species when applied at the manufacturer's recommended application rate.

Application of herbicide shall be in accordance with the manufacturer's instructions and the approved NSCP. Responsible herbicide applicators shall be licensed under the appropriate category as required by State Law.

Mowing shall be allowed if it is proven to be a successful permanent control method of annual noxious / invasive plant species as approved by the Engineer. If approved, mowing shall be performed before the annual noxious / invasive plant species are able to set seed. Mowing shall NOT be operated in areas where there are perennial noxious / invasive plant species. Mowing shall NOT be utilized for noxious / invasive plant species that carry existing seeds (seed heads / pods). All project areas and plant species to be mowed shall be carefully evaluated / identified by an ADOT construction PLA with approval from the Engineer.

Unless otherwise called out in the plans/details specified in these Special Provisions, or as directed by the Engineer, the contractor shall remove the identified noxious / invasive woody vegetation to the finished grade level without uprooting it (flush cutting). In order to stop stump regrowth, the applicable remaining stumps shall be promptly treated with suitable herbicide so the identified noxious / invasive woody vegetation will not sprout new growth from the stumps. Herbicide stump treatment shall NOT be conducted to plant species such as common evergreen coniferous shrubs and trees, which will unlikely generate stump regrowth. Manual / mechanical removal of remaining woody vegetation stumps and rootballs in erosive areas shall be avoided to maximum extent practicable (MEP). The removal method and process shall be evaluated by an ADOT construction PLA with approval from the Engineer.

Removal of soil seed bank that has been contaminated by the natural storage of seeds from noxious / invasive plant species shall be required for projects involving soil / ground disturbance from construction excavations or as designated by the Engineer. The contractor shall remove the top three (3) inches of the existing undisturbed surface soil from the project areas infested with noxious / invasive plant species as evaluated / identified by an ADOT construction PLA with approval from the Engineer. All removed contaminated soil seed bank shall be properly disposed of or placed (buried) below the top two feet (2'-0") of the final finished grade as directed by the Engineer. The removal, stockpile, burial, or disposal of contaminated soil seed banks shall be well contained / concealed during construction. The contractor shall then return all soil-seed-bank removal disturbed areas, to an acceptable surface condition (finished grade), as approved by the Engineer.

No earthmoving activities to the treated areas shall be approved until the employed weed management measures have been inspected to be successfully achieved with the approval of the Engineer.

For projects within transportation easements on BLM, USFS, or Tribal Lands, PUPs shall be prepared and submitted to the Engineer and ADOT construction PLA as required in the NSCP. The PUPs will be submitted by the Department to the appropriate BLM Field Office, National Forest, or appropriate representative of tribal government (governing body) and must be approved by the BLM, National Forest, or tribal government (governing body) before being approved by the Engineer.

The contractor shall keep records of all herbicide applications. A copy of this record shall be added to the NSCP and also submitted to the Engineer after each application. The contractor shall be responsible for the proper transport, storage, and application of all materials necessary for herbicide control treatments.

As a part of the integrated management approach, all areas to be treated for noxious and invasive plant species shall ultimately be seeded, landscaped, or permanently stabilized to minimize and prevent weed re-invasion / re-infestation, as specified in these Special Provisions.

Method of Measurement:

Control of noxious and invasive plant species, either manually (mechanically) or with herbicides, will be measured by the square yard (SQ.YD.) of each treated area, as directed and approved by the Engineer.

Basis of Payment:

Listed bid quantities for Control of Noxious Plants are for estimating and bidding purposes. They shall not be guaranteed to the contractor. The intensity for scope of work, project-specific present conditions, particular stages of noxious and invasive plant development, as well as annual rainfall patterns shall be considered / evaluated by the construction PLA and approved by the Engineer in determining final quantities and unit costs to be paid for.

During pre-construction meeting, the contractor in conjunction with Engineer shall verify and be in agreement with the quantity of areas to be treated as evaluated by an ADOT construction PLA. The quantity of areas to be treated shall be in compliance with environmental requirements.

The accepted quantities of control of noxious and invasive plant species, either manually (mechanically) or with herbicides measured as provided above, will be paid for at the contract unit price for each soil treatment directed and approved by the Engineer. Such price will be considered to include all labor, materials, equipment, and multiple mobilization costs required to complete the work as specified herein. Such price shall also cover collection, removal, containment, and disposal of noxious and invasive plant species. Up to four (4) mobilizations may be required to accomplish control of noxious and invasive plant species as specified herein. The Department will consider the cost of such multiple mobilizations to be included in the price bid for control of noxious and

invasive plant species. Adjustments may be made to the contract through negotiation for more than four (> 4) mobilization activities as per the approval of the Engineer.

No measurement or payment will be made for treatment of those areas, manually / mechanically or with herbicides, not authorized and approved by the Engineer. No payment will be made for treatment areas not in compliance with the approved PUP/NSCP. No payment will be made for areas treated by herbicide products not in compliance with the approved PUP/NSCP. No measurement or payment will be made for the removal and proper disposal of waste materials; the cost being considered is included in contract items.

No measurement or payment will be made for preparation of the NSCP and, when applicable, the PUP, including the initial submittal and modifications, or for monitoring, the costs being considered are included in contract items.

No separate measurement or direct payment will be made for Control of Noxious Plants under Landscape Establishment as specified in Section 807 of the Standard Specifications and these Special Provisions; the cost being considered is included in the respective contract item of Landscape Establishment.

For projects engaging extensive excavations/backfills, no separate measurement or direct payment will be made for the removal, stockpile, burial, or disposal of contaminated soil seed banks, as well as returning all soil-seed-bank removal areas to an acceptable surface condition (finished grade); the cost being considered is included in the respective contract item(s) of excavations/backfills.

(925SRVY, 05/21/26)

SECTION 925 CONSTRUCTION SURVEYING AND LAYOUT:

925-3.01 General: the first paragraph of the Standard Specifications is revised to read:

At the preconstruction meeting, the contractor shall furnish to the Engineer, for approval, the following:

- (A) A schedule of hourly survey services rates and classifications for additional survey work, which shall remain fixed and in effect for the entire duration of the work and shall not be subject to renegotiation; and
- (B) A written outline detailing the method of staking, marking of stakes, grade control for various courses of materials, referencing, structure control, pavement markings, and any other procedures and controls necessary for survey completion. A part of this outline shall also be a schedule which will show the sequencing of the survey and layout work, throughout the course of the contract, listing a percentage of completion for each month.

925-5 **Basis of Payment:** the second and third paragraphs of the Standard Specifications is revised to read:

If additional staking and layout are required as a result of additional work ordered by the Engineer, such work will be paid for in accordance with the provisions of Subsection 109.04 of the specifications.

Payment will be made utilizing the schedule of rates provided per Subsection 925-3.01. No additional payment will be made for overtime hours. Should such additional work require the contractor to pay travel and subsistence costs for the survey party or survey parties utilized, payment for travel and subsistence will be made under the provisions of Subsection 109.04 of the specifications. The Engineer will determine whether the additional work shall be performed by the contractor or by Department forces.

(1001MATL, 06/17/21)

SECTION 1001 **MATERIAL SOURCES:** of the Standard Specifications is revised to read:

1001-1 **Description:**

The work under this section shall consist of the procuring of borrow, topsoil, subbase and base materials, mineral aggregates for concrete structures, surfacing, and landscape plating, from sources either designated on the project plans or in the Special Provisions or from other sources.

1001-2 **General:**

The contractor shall determine for itself the type of equipment and work required to produce a material meeting the requirements of the specifications.

Sites from which material has been removed shall, upon completion of the work, be left in a neat and presentable condition. Where practicable, borrow pits, gravel pits, and quarry sites shall be located so that they will not be visible from the highway.

The contractor shall provide an environmental analysis, as specified in Subsection 104.12 of the specifications, for any source proposed for use regardless of whether a previously approved environmental analysis exists for the site.

In accordance with Subsection 104.12 of the specifications, the contractor may utilize an existing environmental analysis approved after January 1, 1999, provided that the analysis is updated as necessary to be in compliance with current regulations and with the contractor's planned activities.

It shall be the responsibility of the contractor to conduct any necessary investigations, explorations, and research, on-site and otherwise, before and after submitting the bid proposal, to satisfy itself that the specified quantity and/or quality of material exists in any proposed material source.

The contractor shall not produce material for the project, mobilize crushing equipment or clear a worksite prior to approval of the environmental analysis.

The contractor shall comply with the requirements of the landowner or agency having jurisdiction over the land.

The Department makes no representation regarding quality or quantity of materials in any source.

1001-2.01 Information Available:

The Department maintains a listing of materials sources for which a completed environmental analysis is available and the landowner has allowed the source to be placed on the list. Further information on material sources is available at <https://azdot.gov/business/environmental-planning/material-source-guidance>.

1001-2.02 Material Sources in Floodplains:

Any development of a material source that is determined to be in a flood plain must meet the requirements of the appropriate local, state, and federal agencies, including as applicable, the U.S. Army Corps of Engineers, Section 404 of the Clean Water Act, ADEQ or Tribal 401 Water Quality Certification, and the National or Arizona Pollutant Discharge Elimination System (NPDES/AZPDES).

If the contractor wishes to procure a material source within a floodplain, the contractor or material supplier shall submit a Floodplain Use Permit application to the appropriate floodplain management agency. The contractor shall submit to the Department documentation that the Floodplain Use Permit for the material source was approved and signed by the appropriate agency's Floodplain Administrator. The contractor or material supplier shall comply with all the requirements of the Floodplain Use Permit, including renewal of the Permit as needed or required.

The Department will require an engineering report if the material source is situated in the 100 year floodplain of any stream or watercourse, and located within one mile upstream and two miles downstream of any highway structure or surfaced roadway crossing. The engineering report shall be prepared by a professional engineer with expertise in hydrology, hydraulics, river mechanics, and fluvial geomorphology. The engineering report shall address the effects of the potential for structural damages following a 100 year flood event.

All other permits required to obtain a material source shall be furnished to the Department upon request.

Surplus material from agency administered flood control management projects may be used as borrow material only if the contractor submits written evidence to the Engineer that the flood control agency project was fully designed and funded.

Material sources in floodplains located on Native American Tribal Lands will be considered for use on an individual analysis. The analysis shall include a review of applicable land use plans, floodplain management plans, environmental plans, applicable laws and regulations pertaining to Native American Tribal Lands, and an engineering analysis of the effects on any highway facility or structure. The contractor shall obtain from the Bureau of Indian Affairs (BIA) and the Native American Tribal Council all permits, licenses, and approvals for the Department to review.

1001-2.03 Protection and Restoration:

The contractor shall comply with the requirements of Subsections 107.11 and 107.12 of the specifications for protecting and restoring the material source. The contractor shall assume full responsibility to protect and rehabilitate the material source to the satisfaction of the Department and in compliance with the requirements of the Federal Land Management Agency (FLMA) having jurisdiction or by the owner of the material source.

1001-3 Proposed Source:

1001-3.01 Approval Requirements:

(A) General:

The contractor shall notify the Engineer prior to or at the preconstruction conference as to the source that it proposes to use.

The contractor acknowledges that all the conditions set forth in this subsection shall be met prior to the source being approved for use.

Other than sampling and testing, the requirements of this subsection shall be completed prior to initiation of any activities that disturb the existing conditions at the proposed source.

Regulatory changes, specification changes, or other reasons may preclude the approval of a materials source. The contractor acknowledges that the Department may refuse to approve a material source even if the Department had approved the source for other projects.

(B) Specific Conditions for Approval:

The use of a source will require written approval by the Engineer. No approval will be given until the contractor has complied with the following conditions:

- (1) The contractor has submitted an environmental analysis, as specified in Subsection 104.12 of the specifications, of the source proposed for use and the Department has reviewed the analysis and satisfied itself that the use of such source will not have an adverse social, economic or environmental impact. The requirements of Subsection 1001-3.01 of the specifications shall be completed prior to initiation of any activities that disturb the existing conditions at the proposed source.
- (2) The contractor has furnished the Engineer with evidence that he has secured the rights to the source, including ingress and egress.

(C) Historical and Cultural Resources:

The archaeological survey report of the proposed material source shall be prepared by the contractor's archaeological consultant and shall conform to the requirements of Subsection 104.12 of the specifications.

In the event that prehistoric or historic structures and prehistoric or historic artifacts are encountered during any activity related to the construction of the material source, the contractor shall immediately cease operations within a 50 foot radius of the discovery location and notify the Engineer. In the event that an unmarked human burial and/or funerary remains are encountered during any activity related to the construction of the material source, the contractor shall immediately cease operations within a 100 foot radius of the discovery location and notify the Engineer. The Engineer will contact the Environmental Planning – Historic Preservation Team so that appropriate notification of the discovery is made per state and federal regulations.

After notifying the Engineer, the contractor shall, within good faith, secure the area and take all reasonable measures to protect the historical and cultural resources. No activity shall resume unless authorized by the Engineer. The Engineer will not authorize resumption of any activity until receiving confirmation from the Environmental Planning – Historic Preservation Team that the contractor may commence work.

If the Department determines that the proposed use will have major adverse impact on cultural or historic resources, the Department will not allow the use of the source.

(D) Permit from Navajo Nation:

For projects located on the Navajo Reservation, the Navajo Nation has adopted a permitting system for any sources, regardless of whether on or off the Navajo

reservation, which are to supply material for projects located within its boundaries. No material source will be approved until the contractor submits a copy of the permit from the Navajo Nation allowing materials from the proposed source to be used on the project. For information concerning the permit, the contractor shall contact the Navajo Nation Historic Preservation Office.

(E) Bureau of Land Management Material Sources:

If the contractor elects to pursue the use of material sources on BLM land under Title 30 Code of Federal Regulations, it is at the contractor's sole risk, and the Department bears no responsibility for any delays or costs associated with the request to use material sources on BLM Land.

The Department will not request or pursue any "free-use permit" under Title 23 Code of Federal Regulations or any other arrangement with BLM on this project.

1001-4 Special Access within Right Of Way:

The contractor may submit a request to the District Engineer to approve special access to a controlled access highway if special access is not shown on the project plans.

The request by the contractor shall be accompanied by an environmental analysis and by documents which specify the point(s) of access, the acquisition of right of way, the manner in which access will be attained, the traffic control plan, and crossovers, along with all other appropriate data which will allow the District Engineer to evaluate its request. If the request is approved, a supplemental agreement shall be entered into.

All costs associated with the special access requested by the contractor shall be borne by the contractor, including, but not limited to, cattle guards, fences, gates and restoration work.

When access is not being utilized, gates shall be closed and locked. Upon completion of all operations, the area within the right of way that has been disturbed shall be restored to the condition existing prior to the contractor's operations.

The decision by the District Engineer to deny a request by the contractor will be considered to be final.

1001-5 Fences and Cattle Guards:

Where the haul roads to material sources cross existing fence lines in areas where there is livestock of any kind, temporary cattle guards shall be installed by the contractor at each crossing.

The livestock operator or owner shall be contacted prior to the beginning of any operations and effective measures shall be taken and means provided by the contractor to prevent livestock from straying.

In operations where conditions will exist that are dangerous to livestock of any kind, temporary cattle guards and fence shall be installed around the pit area by the contractor to protect livestock.

Temporary cattle guards and fence installed by the contractor shall be removed and existing fence disturbed shall be replaced or reconstructed and all fence shall be left in as good condition as it was prior to the beginning of work.

(1002PAINT, 06/19/25)

SECTION 1002 PAINT: of the Standard Specifications is revised to read:

1002-1 General Requirements:

All paints specified herein shall be ready-mixed at the manufacturer's plant, except for inorganic zinc rich primer, which shall be mixed by the fabricator or at the project site just prior to application. All paints shall be standard paint products of the manufacturer with published product data sheets and shall comply in all details with the specifications.

Ready-mixed paint shall be homogeneous, free of contaminants, and shall be of a consistency suitable for the use for which it is specified. The pigment shall be finely ground and properly dispersed in the vehicle, according to the requirements for the type of paint, and this dispersion shall be such that the pigment does not settle appreciably, does not cake or thicken in the paint container, and does not become granular, jelled, or curdled. Any settlement of pigment in the paint shall be easily dispersed with a paddle so as to produce a smooth uniform paint of the proper consistency. The manufacturer shall include in the paint the necessary additives for control of sagging, leveling, drying, drier absorption, and skinning.

Lead, lead compounds, soluble barium compounds, or hexavalent chromium compounds shall not be used as raw materials in the paint formulas specified under this section, and shall not be added to any paint formulas specified under this section.

The use of halogenated solvents is not permitted.

Paint shall be furnished in new, unopened air-tight containers, which are clearly labeled with the exact title of the paint, Federal Specification number when applicable, name and address of the manufacturer, product code, date of paint manufacture, and the lot or batch number. The containers shall meet U.S. Department of Transportation Hazardous Materials Shipping Regulations. Precautions concerning the handling and the application of the paint shall be shown on the label of the paint containers.

All of the paints of any coating system consisting of individual paints (such as a primer, intermediate coat, and topcoat), shall be made by the same manufacturer, and shall be designed and sold to be used together as a system.

Only paints and paint systems approved in accordance with Subsection 1002-3 of the specifications and shown on the Department's Approved Products List (APL) will be allowed for use. Copies of the most current version of the APL are available on the Department's website from the ADOT Research Center, through its Product Evaluation Program. Paint supplied by an approved manufacturer with a different product code from that which was previously evaluated and approved will require evaluation to determine if it is acceptable.

The contractor shall submit to the Engineer a Certificate of Compliance for each lot or batch of paint supplied, in accordance with Subsection 106.05 of the specifications, prior to its use. Product data sheets listing the paint constituents and their proportions as well as Materials Safety Data Sheets (MSDS) are required for each paint material supplied prior to its use.

All applicable governmental environmental regulations shall be adhered to during cleanup and for the disposal of unused paint.

1002-2 Paint Types:

1002-2.01 Three-Paint Coating System:

(A) General:

A three-paint coating system shall be for use on metallic surfaces, and shall include a primer (Paint Number 1), intermediate coat (Paint Number 2), and topcoat (Paint Number 3) from the same system. All three paints shall be water-based, 100 percent acrylic (acrylic latex) paints, unless a non water-based primer is specified, in which case, the topcoat and intermediate coat must be a water-based acrylic paint.

Each individual paint shall conform to all of the chemical and physical characteristics and properties as declared on the manufacturer's product data sheet. In addition, the paint color shall be as specified in the project plans, and the consistency shall be in accordance with the manufacturer's recommendations. The contractor shall use the checking and calibration procedures found in ASTM D4212 and verify the paint consistency with the Engineer prior to each application.

Each coating is intended for spray application. Limited application can be made by brushing or rolling if approved by the Engineer.

Paint Number 1 - Primer:

This paint shall be used on blast cleaned steel surfaces for the first coat of a three-paint coating which must include Paint Number 2 and Paint Number 3 from the same system.

Paint Number 2 - Intermediate Coat:

This paint for intermediate coats shall be used on primed steel surfaces as the second coat of a three-paint coating system which must include Paint Number 1 and Paint Number 3 from the same system. The paint shall be appropriately tinted to contrast with the prime coat.

Paint Number 3 - Topcoat:

Paint for topcoats shall be used as the third coat of a three-paint coating system which must include Paint Number 1 and Paint Number 2 from the same system.

For topcoats, the gloss shall be as specified on the project plans. The available colors for topcoats shall provide visual matches to the colors given in the Federal Standard No. 595. The colors shall be available in high-gloss enamels, if required.

1002-2.02 Zinc Rich Primer:

Zinc-rich primer shall be a solvent based, one-part, epoxy ester, zinc-rich coating made to contain no less than 89 percent by weight of zinc dust in the dried film. Zinc-rich primer is suitable for limited use on cuts, welds, or damaged galvanized surfaces, as needed to restore the continuity of cathodic protection. Zinc-rich primer shall be certified by the manufacturer to be compatible with any suitable water-based acrylic finish paint.

Zinc-rich primer shall be used where zinc paint is called for elsewhere in the specifications.

1002-2.03 Inorganic Zinc-Rich Primer:

Inorganic zinc-rich primer shall be a solvent-based three-component, inorganic, ethyl silicate, zinc-rich coating for use on steel surfaces which will be exposed to severely corrosive environments. The primer shall be mixed in accordance with the manufacturer's directions by the fabricator or at the project site just prior to application. Inorganic zinc-rich primer shall be made to contain no less than 80 percent by weight of zinc dust in the dried film, and shall be certified by the manufacturer to form a strong bond to properly cleaned and prepared steel surfaces, either sandblasted or galvanized. This primer shall also be certified by the manufacturer to be compatible with any suitable water-based acrylic finish paint.

1002-2.04 Alkyd Primer:

Alkyd primer shall be solvent-based, and shall be designed for ferrous metal surfaces where there are rusting issues which rule out the use of a water-based primer. Such surfaces may include ornamental iron, tanks, fabricated parts, handrails, and objects referred to as "black steel." Alkyd primer shall be certified by the manufacturer to be compatible with any suitable water-based acrylic finish paint.

1002-2.05 Direct-to-Metal (DTM) Combination Primer and Finish Paint:

This paint shall be a water-based acrylic paint specially designed for use as a direct-to-metal (DTM) primer or combination primer and finish. The product shall be certified by the manufacturer to form a strong bond to properly cleaned and prepared surfaces of structural steel and other metallic products such as metal buildings, tanks, and pipes. It shall also be certified to bond with other properly cleaned and prepared surfaces such as galvanized steel, oil-based paints, and alkyd enamels. When used on ferrous metal surfaces where there are rusting issues, the paint shall be rust-inhibitive. Direct-to-metal combination primer and finish paints shall be designed to be usable as a complete two or three coat system. When used as a primer only, the paint shall be certified by the manufacturer to be compatible with any suitable water-based acrylic finish paint.

1002-2.06 Acrylic Emulsion Paint:

Acrylic emulsion paint shall be used on concrete and masonry surfaces, and shall be a water-based, 100 percent acrylic (acrylic latex) paint.

This paint may be tinted by using "Universal" or "all purpose" concentrates.

The color of the final coat of paint shall be as indicated on the project plans. If no color is specified on the plans, the paint color shall approximate that of paint color chip No. 30318, as specified by Federal Test Standard Number 595, when applied to either a concrete test specimen measuring 2 feet by 2 feet, or to the surface of the concrete structure to be painted.

The Engineer will determine color acceptance by visual inspection.

1002-3 Sampling and Testing:

(B) General:

Any lot or batch of paint may, at any time, be sampled and tested for conformance to the specifications and the chemical and physical characteristics and properties as declared by the manufacturer on the product data sheets submitted with the original samples used in the evaluation and approval of the product. Also, complete coating system samples may be required at any time for follow-up evaluation using the performance test method employed in the original evaluation for approval of the system.

(C) Coating Systems for Structural Steel and Other Metallic Surfaces :

Coating systems composed of the paints specified in Subsections 1002-2.01 through 1002-2.05 of the specifications will be tested as complete systems applied to steel panels and weathered in accordance with ASTM G154, and exposure cycle number 4 of ASTM D4587, in the Q-U-V Accelerated Weathering Tester, utilizing UVB 313 lamps. Each system shall have an evaluation rating of 100 or greater after 2000 hours of weathering. The procedure is as follows:

Paint coatings will be applied to cold rolled steel panels (ASTM D609, Type 3, ASTM A366). The paint will be thinned to 75 ± 2 Ku consistency using demineralized water. Three coats, each approximately 2 mils thickness are applied to each of four panels according to ASTM D823. The fourth coated panel from each set will be inscribed with an "X" cut to the steel substrate and extending across the entire coated area;

The exposure cycle used with the weathering tester shall be D = 8 h UV/60 degree C followed by 4 h CON/45 degree C. One panel from each set of four shall be removed at 1000 hours and another at 1500 hours. The last two panels shall be removed at 2000 hours;

Paint systems will be evaluated on the basis of six measures of degradation which may be found to occur under the conditions of exposure. For each measure, a rating scale of one to five points will be applied. A rating of one point indicates the poorest performance and five points indicate the best performance. The rating from each measure is multiplied by a weighting factor which represents the relative importance of that measure. The product is a score for that measure. The sum of the scores for all measures is the overall score for the system. To be acceptable, paint systems shall have an overall score of 100 or higher;

Cracking/Flaking: ASTM D660, ASTM D661, and ASTM D772 are used in combination to determine the rating scale. A weighting factor of three will be applied to the results of these tests;

Blistering/Flaking: ASTM D714 and ASTM D772 are used in combination to determine the rating scale. A weighting factor of three will be applied to the results of these tests;

Corrosion: A rating scale is derived from ASTM D610 for evaluating the degree of rusting. A weighting factor of three will be applied to the results of this test;

Chalking/Erosion: ASTM D4214 and ASTM D662 are used in combination to determine the rating scale. A weighting factor of three will be applied to the results of these tests;

Adhesion: The tape test is based on ASTM D3359 and the rating scale is from the Classification of Adhesion Test Results under Test Method B. A weighting factor of five will be applied to the results of this test; and

Flexibility: ASTM D522, using a 1-1/4 inch mandrel, is employed to determine flexibility. The degree of cracking observed after bending is used to determine the rating scale. A weighting factor of five will be applied to the results of this test.

Paint for Concrete and Masonry Surfaces:

Paint for concrete and masonry surfaces will be tested in accordance with the following procedures:

Resistance to Accelerated Weathering:

The paint will be applied to concrete mortar panels and weathered in a Q-U-V accelerated weathering tester, according to ASTM G154, for 2000 hours utilizing UVB-313 lamps, and exposure cycle number 4 of ASTM D4587. The paint weathered in this manner shall show no appreciable change in color or appearance due to fading, chalking, or material reaction.

Adhesion:

The paint shall be applied to a concrete or masonry test surface approved by the Engineer, in accordance with the application plan specified in Subsection 610-3.03 of the specifications. After a minimum period of 30 days of outdoor exposure, the adhesion of the paint will be measured. Testing will be performed in accordance with the requirements of ASTM D4541, Method E, with a strength of at least 100 pounds per square inch being required. In addition, testing will also be performed in accordance with the requirements of ASTM D3359, Method A, with a rating of 3A or higher being required.

(1003REBAR,12/17/20)

SECTION 1003 REINFORCING STEEL: of the Standard Specifications is revised to read:

1003-1 General Requirements:

Reinforcing steel shall be furnished in the sizes, shapes, and lengths shown on the plans and in conformance with the requirements of the specifications.

Certificates of Compliance conforming to the requirements of Subsection 106.05 of the specifications shall be submitted for epoxy coated reinforcing bars, as well as uncoated reinforcing bars, wire, and welded wire fabric. In addition, for epoxy coated reinforcing bars, Certificates of Compliance shall be submitted from the coating manufacturer and Certificates of Analysis shall be submitted from the coating applicator.

When reinforcing steel is delivered to the project site, the contractor shall furnish the Engineer with a copy of all shipping documents. Each shipping document shall show the sizes, lengths, and weights of the reinforcing steel separately for each structure.

Reinforcing steel shall be free of dirt, oil, paint and grease and shall conform to the requirements of Section 605 of the specifications. Reinforcing steel shall be protected at all times from damage. All reinforcing steel shall be free of dirt, oil, paint and grease. Rust, surface irregularities, or mill scale will not be the cause for rejection, provided the weight, dimensions, cross-sectional area, and tensile properties of a manually wire brushed test specimen are not less than the requirements of the specifications.

1003-2 Reinforcing Bars:

Except when used for wire ties or spirals, steel bars used as reinforcement in concrete shall be deformed and shall conform to the requirements of ASTM A615 for Grade 60 steel. Unless otherwise specified, steel bars meeting the requirements of ASTM A706 may be substituted for ASTM A615 steel bars. When ASTM A706 bars are used, tack welding of the reinforcement will not be permitted unless approved by the Engineer.

Samples of reinforcing bars taken at the supplier's or fabricator's place of business shall be defined as pre-shipment samples, while those samples obtained from stockpile or shipment at the project shall be defined as project samples. A shipment shall be considered any amount of reinforcing bars delivered to a project on any given day, of one transported load.

Reinforcing bars sizes No. 4, No. 5, and No. 6 will be accepted with the submission of a Certificate of Compliance. All other reinforcing bar sizes shall be subject to pre-shipment and project sampling as outlined below.

1003-2.01 Pre-Shipment Sampling:

Prior to shipment of reinforcing bars to the project, the supplier or contractor shall contact Materials Group, Structural Materials Testing Section to obtain a laboratory number referenced to the project number. A random sample shall be taken at the supplier's place of business and delivered to the Structural Materials Testing Section. For bar size No. 14, the sample shall be one piece not less than 42 inches in length, selected at random for each shipment up to 30 tons. For bar size No. 18, the sample shall be one piece not be less than 42 inches in length, selected at random for each shipment up to 50 tons. For all other bar sizes, the sample shall be one piece not less than seven feet in length, selected at random for each shipment up to 20 tons. Samples shall be submitted for each bar size, grade, heat number, and manufacturer in the shipment. The pre-shipment bars that are obtained from the supplier or fabricator must be accompanied by a Certificate of Compliance. The information shown on the certificate must match the bar identification marks. If no Certificate of Compliance is available or the information shown on the certificate is incomplete or inaccurate, the bars will not be accepted for testing.

When the supplier or fabricator makes a shipment to a project, a Certificate of Compliance shall be furnished stating that the material in the shipment is from the same stock as the pre-shipment sample covered by the laboratory number assigned by the Structural Materials Testing Section. Reinforcing bars represented by the pre-shipment sample failing to comply with the specification requirements shall not be used on any project.

1003-2.02 Project Sampling:

The Engineer reserves the right to sample reinforcing bars at any time. Project samples shall consist of one sample bar not less than seven feet in length for all bar sizes. Placement of the reinforcing bars shall not be delayed while the contractor is awaiting test results.

Concrete placement operations shall not begin until satisfactory test results of the project sample bars are obtained.

When the supplier or fabricator makes a shipment to a project from outside the Phoenix or Tucson areas, or not otherwise subjected to pre-shipment sampling, the shipment shall be accompanied by a Certification of Compliance. Before any reinforcing bars from a shipment is to be incorporated into the project work, a project sample shall be taken, tested, and approved by the Structural Materials Testing Section. A project sample shall be taken as soon as practical upon arrival at the job site. A different project sample that is representative of each bar size, grade, heat number, and manufacturer from that shipment will be required. The sampling requirements described for pre-shipment sampling for the Phoenix or Tucson areas shall be used.

1003-3 Wire:

Steel wire used as spirals or ties for reinforcement in concrete shall conform to the requirements of AASHTO M 336. Wire shall be deformed or cold drawn (smooth).

1003-4 Welded Wire Fabric:

Welded wire fabric for concrete reinforcement shall conform to the requirements of AASHTO M 336.

1003-5 Epoxy Coated Reinforcing Bars:

1003-5.01 Steel:

Reinforcing bars shall conform to the requirements of Subsection 1003-2 of the specifications.

Epoxy coated reinforcing bars will be sampled and tested in the same manner as uncoated reinforcing bars. The coating and flexibility of the epoxy coated reinforcing bars will also be tested by the Department for acceptance.

1003-5.02 Epoxy for Coating:

A list of powdered epoxy resins which have passed prequalification tests, as described in ASTM A775, "Epoxy Coated Steel Reinforcing Bars", is maintained on the Department's Approved Products List (APL). The powdered epoxy resins selected by the contractor and furnished by the manufacturer shall be of the same material and quality as the resins listed on the APL, and shall be applied and cured in the same manner used to coat the test bars in the original powder prequalification test. Copies of the most current version of the APL are available on the internet from the ADOT Research Center through its Product Evaluation Program.

Prequalification testing may be performed by the National Bureau of Standards, State laboratories, or qualified private laboratories.

The Certificate of Compliance from the coating manufacturer shall properly identify the batch and/or lot number, material, quantity of batch, date of manufacture, name and address of manufacturer, and a statement that the material is the same composition as the initial sample prequalified for use. The certificate shall also state that production bars and prequalification bars have been identically prepared and applied with epoxy powders.

Patching or repair material, compatible with the coating and inert in concrete shall be made available by the epoxy coating manufacturer. This material shall be suitable to repair areas of the coating which were damaged during fabrication or handling in the field.

1003-5.03 Application of Coating:

The coating applicator's facility shall be subject to approval by the Department. Applications for approval of facilities shall be made to the Department by the coating applicator.

The surface to be coated shall be blast cleaned in accordance with the requirements of the Society for Protective Coatings, Surface Preparation Standard SSPC-SP10, Near White Blast Cleaning.

The powdered epoxy resin coating shall be applied to the cleaned surface as soon as possible after cleaning and before visible oxidation occurs. In no case shall more than eight hours elapse between cleaning and coating.

The protective epoxy coatings shall be applied by the electrostatic spray method or the electrostatic fluidized bed method in accordance with the recommendations of the coating manufacturer. The epoxy coating may be applied before or after fabrication of the reinforcing bars.

The epoxy coating shall be applied as a smooth uniform coat. After curing, the coating thickness shall be in accordance with the requirements of ASTM A775. Coating thickness shall be controlled by taking measurements on a representative number of bars from each production lot. Coating thickness measurements shall be conducted by the method outlined in the Society for Protective Coatings Paint Application Standard SSPC-PA2.

The coating shall be checked visually after cure for continuity. It shall be free from holes, voids, contamination, cracks and damaged areas.

The coating shall not have more than two holidays (pinholes not visible to the naked eye) in any linear foot of the coated item. A holiday detector shall be used, in accordance with the manufacturer's instructions, to check the coating for holidays.

The flexibility of the coating shall be evaluated on a representative number of bars selected from each production lot. The coated bar shall be bent 120 degrees (after rebound) around a six-inch diameter mandrel. The bend shall be done at a uniform rate and may take up to one minute to complete. The test specimens shall be at thermal equilibrium between 68 and 85 degrees F at the time of testing. No cracking of the coating shall be visible to the naked eye on the outside radius of the bent bar.

The contractor shall furnish a Certificate of Analysis from the coating applicator with each shipment of coated steel. In addition to the requirements of Subsection 106.05 of the specifications, the Certificate of Analysis shall state that the coated items and coating material have been tested in accordance with the requirements of this subsection and that the entire lot is in a fully cured condition.

The coating applicator shall be responsible for performing quality control and tests. This will include inspection and testing to determine compliance with the requirements of this subsection for the coating thickness, continuity of coating, coating cure, and flexibility of coating.

The Department reserves the right to have its authorized representative observe the preparation, coating, and testing of the reinforcing bars. The representative shall have free access to the plant, and any work done when access has been denied will be automatically rejected.

If the representative elects, lengths of coated bars may be taken from the production run on a random basis for test, evaluation, and check purposes by the Department.

1003-5.04 Shop Repair:

Epoxy coated reinforcing bars which do not meet the requirements for coating thickness, continuity of coating, coating cure, or flexibility of coating shall not be repaired.

Reinforcing bars with these defects shall be replaced, or alternately stripped of epoxy coating, recleaned and recoated in accordance with the requirements of this specification.

Coating breaks due to fabrication and handling shall be repaired with patching material if the defective area exceeds 2 percent of the surface area of the bar in a one-foot length and the damaged spot is larger than 1/4 inch by 1/4 inch.

The repair of coating breaks shall be limited to bars on which the total of the defective coating areas does not exceed 5 percent of the surface area of the reinforcing bar. Bars with greater than 5 percent damage shall be replaced, or alternately stripped of epoxy coating, recleaned and recoated in accordance with the requirements of this specification.

1003-6 Prestressing Reinforcing Steel:

Prestressing reinforcing steel shall conform to the requirements of Section 602-2.01 of the specifications.

Prestressing steel shall be high-tensile steel wire, high-tensile seven-wire strand or high-tensile alloy bars, as shown in the plans.

High-tensile steel wire shall conform to the requirements of AASHTO M 204.

High-tensile seven-wire strand shall conform to the requirements of AASHTO M 203 for Grade 270. In addition to the 0.5-inch diameter prestressing steel typically shown on the plans, 0.6-inch diameter seven-wire strand may be used for cast-in-place prestressed structures.

High-tensile alloy bars shall conform to the requirements of AASHTO M 275.

All prestressing steel shall be satisfactorily protected from damage by abrasion, moisture, rust, or corrosion and shall be free of dirt, rust, oil, grease, or other deleterious substances.

For every five reels of prestressing steel furnished, one sample not less than six feet long, will be tested by the Engineer. Samples of the furnished reels with the manufacturer's Certificate of Compliance, a mill certificate, and a test report may be shipped directly by the manufacturer to the Engineer.

1003-7 Dowel Bars for Portland Cement Concrete Pavement:

Dowel bars shall be round, plain steel bars of the dimensions shown on the plans conforming to the requirements of AASHTO M 254 with Type B coating. The core material shall conform to the requirements of ASTM A615, Grade 60.

Epoxy coated dowel bars shall also conform to the requirements of Subsection 1003-5 of the specifications.

The Contractor shall furnish a Certificate of Compliance that properly identifies the coating material, the number of each batch of coating material used, quantity represented, date of manufacture, name and address of manufacturer, and a statement that the supplied coating material meets the requirements of AASHTO M 254 with Type B coating.

(1005PG, 06/19/25)

SECTION 1005 BITUMINOUS MATERIALS:

1005-3 Bituminous Material Requirements:

1005-3.01 Asphalt Cement: of the Standard Specifications is revised to read:

Asphalt cement shall be a performance grade (PG) asphalt binder conforming to the requirements of AASHTO M 320. Air blown/oxidized asphalt, Polyphosphoric acid (PPA) modification and re-refined/recycled engine oil bottom (REOB) will not be accepted. The pressure aging temperature for all binders, including Terminal Blend rubberized binder and Polymer modified asphalt binder shall be as specified below:

PG Asphalt Binder	Pressure Aging Temperature
PG 70-XX and above	110 °C
PG 64-XX and below	100 °C

If Terminal Blend rubberized binder (XX-XXTR+) is used, it shall conform to the requirements of Table 1005-1 and 1005-1a.

If Polymer modified asphalt binder (XX-XXPM) is used, it shall conform to the requirements of Table 1005-1 and 1005-1b.

If, during asphaltic concrete production, it is determined by testing that asphalt cement fails to meet the requirements for the specified grade, the asphaltic concrete represented by the corresponding test results shall be evaluated for acceptance. Should the asphaltic concrete be allowed to remain in place, the contract unit price for asphaltic concrete will be adjusted by the percentage shown in Table 1005-1. Should the asphalt cement be in reject status, the contractor may, within 25 days of receiving notice of the reject status, supply an engineering analysis of the expected performance of the asphaltic concrete in which the asphalt cement is incorporated. The engineering analysis shall detail any proposed corrective action and the anticipated effect of such corrective action on the performance. Within three working days, the Engineer will determine whether or not to accept the contractor's proposal. If the proposal is rejected, the asphaltic concrete shall be removed and replaced with asphaltic concrete meeting the requirements of the specifications at no additional expense to the Department. If the contractor's proposal is accepted, the asphaltic concrete shall remain in place at the applicable percent of contract unit price allowed, and any necessary corrective action shall be performed at no additional cost to the Department.

1005-3.03 Emulsified Asphalt: the fourth paragraph of the Standard Specifications is revised to read:

Emulsified asphalts shall be homogeneous. If emulsified asphalt has separated, it shall be thoroughly mixed to insure homogeneity. If emulsified asphalt has separated due to freezing, it shall not be used. Emulsified asphalt shall not be used after 30 days from production.

1005-3.04 Emulsified Asphalt (Special Type): of the Standard Specifications is revised to read:

Emulsified asphalt (special type) shall consist of Type SS-1 or CSS-1 diluted with water to provide an asphalt content not less than 26 percent. The water used shall be potable. Potable water obtained from public utility distribution lines will be acceptable. The water used shall be free of injurious amounts of oil, acid, alkali, clay, vegetable matter, silt, or other harmful matter. The material shall not be diluted in the field.

1005-3.07 Other Requirements: the tables 1005-1, 1005-1a, and 1005-1b of the Standard Specifications are revised to read:

TABLE 1005-1 ASPHALT BINDER ADJUSTMENT TABLE			
Test Property	AASHTO Test Method	Test Result	Percent of Contract Unit Price Allowed
Dynamic Shear of Original Binder: $G^*/\sin \delta$, kPa	T 315	≥ 1.00	100
		0.90-0.99	98
		0.70-0.89	95
		< 0.70	88 (1)
Dynamic Shear of RTFO	T 315	≥ 2.20	100

Binder: G*/Sin δ, kPa		2.00-2.19 1.60-1.99 < 1.60	98 95 88 (1)
Dynamic Shear of PAV Binder: G*Sin δ, kPa	T 315	≤ 5000 5001-5500 5501-7000 7001-8000 > 8000	100 98 95 89 87 (1)
Creep Stiffness of PAV Binder: S, Mpa	T 313	≤ 300 301-330 331-450 451-600 > 600	100 98 95 89 87 (1)
m-value at 60 sec.	T 313	≥ 0.300 0.270-0.299 0.230-0.269 < 0.230	100 98 90 87 (1)
Notes:			
(1) Reject Status: The pay adjustment applies if allowed to remain in place.			
(2) Specified properties in AASHTO M 320 for flash point, viscosity at 135 °C, and mass loss are not considered performance related. Specification deficiencies for these properties shall be cause for a work stoppage until specification properties are met, but will not be cause for a pay adjustment.			
(3) Should the bituminous material be deficient on more than one property, the pay adjustment will be the greatest reduction to the contract unit price specified considering individual test results.			
(4) The information presented in this table does not apply to asphalt cement used for tack coats.			

TABLE 1005-1a Terminal Blend rubberized binder (XX-XXTR+)				
Test Property	Test Method	Requirement	Test Result	Percent of Contract Unit Price Allowed
Solubility, %, minimum	ASTM D7553 or ASTM 2042	98	-----	-----
Elastic Recovery, @ 10 °C, %, minimum	AASHTO T 301	75	75 70 - 74 < 70	100 89 87 (1)
(1) Reject Status: The pay adjustment applies if allowed to remain in place.				
Notes: In case of dispute, ASTM D2042 shall be used to determine the Solubility. The asphalt binder shall contain a minimum of 8 percent crumb rubber and a minimum of 3 percent SBS (styrene-butadiene-styrene) polymer. The crumb rubber shall be derived from processing whole scrap tires or shredded tire materials. The tires from which the crumb rubber is produced shall be taken from automobiles, trucks, or other equipment owned and operated in the United States. The processing shall not produce, as a waste product, casings or other round tire material that can retain moisture when stored or disposed of above ground. Modified binders shall be blended at the source of supply and delivered as a homogenous mixture to the job site. Modified Binders stored at the asphalt concrete mixing plant for more than two weeks or beyond the supplier recommended shelf life, whichever is less, shall be sampled and tested.				
TABLE 1005-1b Polymer Modified Asphalt Binder (XX-XXPM)				
Test Property	Test Method	Requirement	Test Result	Percent of Contract Unit Price Allowed
Solubility, %, minimum	ASTM D7553 or ASTM D2042	98	-----	-----
Elastic Recovery @ 10°C, %, minimum	AASHTO T 301	75	≥ 75 70 - 74 < 70	100 89 87 (1)
(1) Reject Status: The pay adjustment applies if allowed to remain in place.				

Notes:

In case of dispute, ASTM D2042 shall be used to determine the Solubility.

Asphalt binder shall contain a minimum of 3 percent SBS (styrene-butadiene-styrene) polymer.

Modified binders shall be blended at the source of supply and delivered as a homogenous mixture to the job site.

Modified Binders stored at the asphalt concrete mixing plant for more than two weeks or beyond the supplier recommended shelf life, whichever is less, shall be sampled and tested.

1005-3.07 Other Requirements: the table 1005-1c of the Standard Specifications is hereby deleted.

1005-3.07 Other Requirements: the table 1005-3 of the Standard Specifications is revised to read:

TABLE 1005-3							
EMULSIFIED ASPHALTS							
Tests On Emulsion	Test Method	Requirement					
		RS-1	CRS-1	RS-2	CRS-2	SS-1	CSS-1
Viscosity: Saybolt Furol, seconds, range 77 °F 122 °F	AASHTO T 59	20-100	20-100	50-400	50-400	20-100	20-100
Settlement: 5 days, %, maximum	AASHTO T 59	5	5	5	5	5	5
Sieve: Retained on No. 20, %, maximum	AASHTO T 59 (1)	0.10	0.10	0.10		0.10	0.10
Particle Charge	AASHTOT 59		Pos.		Pos.		Pos. (2)
Demulsibility: 35 mL, 0.02 N calcium chloride %, minimum	AASHTO T 59	60		60			
Classification: Uncoated particles, %, minimum	Arizona Test Method 502				55		

Residue: (3)							
Residue, %, minimum (4)		55	60	63	65	57	57
Notes: (1) Distilled water shall be used. Two percent sodium oleate solution will not be accepted. (2) If the Particle Charge Test result is inconclusive, material having a maximum PH value of 6.7 will be acceptable. (3) Residue will be obtained in accordance with the requirements of Arizona Test Method 504 and shall conform to all the requirements of AASHTO M 320 for PG 64-16, except that for CRS-2 the dynamic shear ($G^*/\sin \delta$) on the original residue shall be a minimum of 1.00 kPa and a maximum of 1.50 kPa. (4) Residue by evaporation may be determined in accordance with the requirements of Arizona Test Method 512; however, in case of dispute, AASHTO T 59 will be used.							

1005-3.07 Other Requirements: the note (2) of Table 1005-3a of the Standard Specifications is revised to read:

(2) Testing shall be performed on residue by distillation. Testing on residue by oven evaporation will not be accepted.

1005-3.07 Other Requirements: the table 1005-5 of the Standard Specifications is revised to read:

TABLE 1005-5					
EMULSIFIED RECYCLING AGENTS					
Tests on Emulsified Recycling Agent	Test Method	Requirement			
		ERA-1	ERA-5	ERA-25	ERA-75
Viscosity: Saybolt Furol, 77 °F, seconds range	AASHTO T 59	15 - 40	15 - 100	15 - 100	15 - 100
Miscibility	AASHTO T 59	Passes	Passes	Passes	Passes
Sieve Test: %, maximum	AASHTO T 59 (1)	0.10	0.10	0.10	0.10
Particle Charge	AASHTO T 59	Positive	Positive	Positive	Positive
Residue: (2) Residue, %, minimum	(3)	60	60	60	60

Notes:

- (1) Distilled water shall be used. Two percent sodium oleate solution will not be accepted.
- (2) Residue will be obtained in accordance with the requirements of Arizona Test Method 504 and shall conform to the requirements specified in Table 1005-4.
- (3) Residue by evaporation may be determined in accordance with the requirements of Arizona Test Method 512; however, in case of dispute, AASHTO T 59 will be used.

1005-3.07 Other Requirements: the Paving Asphalt row of the table 1005-6 of the Standard Specifications is modified to add:

TABLE 1005-6 OTHER REQUIREMENTS			
Grade of Asphalt Specification Designation	Range of Temperatures for Application by Spraying, °F (Not applicable for Plant Mixing)	Range of Aggregate Temperatures for Plant Mixing, °F	Basis of Conversion, Average Gallons Per Ton at 60 °F
Paving Asphalt	275 - 400	-----	
PG 76-22 PM			231
PG 70-22 PM			232
PG 64-28 PM			233

(1006PCC, 09/21/23)

SECTION 1006 PORTLAND CEMENT CONCRETE:

1006-2.01(A) General: of the Standard Specifications is revised to read:

Cementitious material is defined as an inorganic material or a mixture of inorganic materials that sets and develops strength by chemical reaction with water by formation of hydrates and is capable of doing so under water. In this specification, cementitious materials are defined as hydraulic cement (Portland cement, Portland-pozzolan cement or Portland-limestone cement) and supplementary cementitious materials (fly ash, natural pozzolan, or silica fume).

1006-2.01(B) Hydraulic Cement: the first paragraph of the Standard Specifications is revised to read:

Hydraulic cement shall consist of Portland cement, Portland-pozzolan cement or Portland-limestone cement.

1006-2.01(B) Hydraulic Cement: of the Standard Specifications is modified to add:

Portland-limestone cement shall conform to the requirements of ASTM C595 for blended hydraulic cement with moderate sulfate resistance, Type IL (MS).

1006-2.01(C)(2) Flyash and Natural Pozzolan: of the Standard Specifications is revised to read:

Fly ash and natural pozzolan shall conform to the requirements of ASTM C618 for Class C, F, or N.

TABLE 1006-5 Design Criteria: the column heading of the third column of the Standard Specifications is revised to read:

		Cementitious Material Content: Lbs. per Cu Yd. Minimum - Maximum		

1006-3.02(C) Mix Design Submittal Requirements: the items (16) and (18) of the Standard Specifications are revised to read:

(16) Volume of each material measured to the nearest hundredth of a cubic foot;

(18) Total volume measured to the nearest hundredth of a cubic foot;

1006-7.02(A) General: the fifth paragraph of the Standard Specifications is revised to read:

Concrete shall be sampled in accordance with ASTM C172 for acceptance testing of temperature, slump, unit weight and yield (when required) and air content (when required) as well as for fabrication of test cylinders for compressive strength determination at 28 days except that the concrete shall be sampled once during discharge at the middle portion of the batch. ASTM C172 includes sampling from stationary, paving and truck mixers, and from agitating and non-agitating equipment used to transport central-mixed concrete and from continuous mixing equipment as described in Specification ASTM C685/C685M. Sampling shall be at the point of

discharge from truck mixers. Sufficient care shall be taken to obtain a representative sample by diverting the entire stream of the concrete to prevent segregation. Samples shall be of sufficient size to perform all the required tests and fabricate the necessary test cylinders but in no case less than 1 cubic foot.

1006-7.02(B) Class S and Class B Concrete: of the Standard Specifications is revised to read:

For Class S concrete with a compressive strength requirement less than 4000 psi, or Class B concrete, a strength test will consist of the average strength of two test cylinders. However, if the compressive strengths of the two test cylinders differ by more than 10 percent from the average of the two, the strength test result shall be the cylinder with the highest compressive strength.

For Class S concrete with a compressive strength requirement equal to or greater than 4000 psi, or Class P concrete, the compressive strength of each sample shall be determined by averaging the results of the three test cylinders. However, if the compressive strength of any one of the three test cylinders differs by more than 10 percent from the average of the three, its result shall be discarded and the compressive strength shall be the average of the remaining two cylinders. Should the individual compressive strength of any two of the three remaining cylinders differ by more than 10 percent from the average of the three, the results will be discarded and the compressive strength shall be the strength of the remaining cylinder.

1006-7.03(A)(3) Consistency: the third paragraph of the Standard Specifications is revised to read:

When the concrete is pumped, samples for consistency will be taken as the concrete leaves the mixer.

TABLE 1006-10 Air Entrainment Requirements: the table of the Standard Specifications is revised to read:

TABLE 1006-10 Air Entrainment Requirements		
Elevation	Air Entrainment Required	Required Air Content by Volume (%)
3000 feet or above	Yes	4 to 7
Below 3000 feet	Contractor's Option	≤ 7

APPENDIX- A

Western Burrowing Owl Awareness



Western Burrowing Owl Awareness

ADOT Environmental Planning

1611 W. Jackson St- Mail Drop EM02

Phoenix, AZ 85007

The purpose of this flyer is to provide ADOT employees and contractors, working on roadside projects, with basic knowledge to reduce the risk of incidental take of Western Burrowing Owls.

Legal Status:

Western Burrowing Owls (*Athene cunicularia*) are protected under the Federal Migratory Bird Treaty Act of 1918. All migratory birds and their parts are fully protected. They are also protected under Arizona State Law in Title 17-101, Title 17-235, and Title 17-236.

What to look for:

- Description— small, ground-dwelling owl.
- Length— 19.5-25.0 cm (7.68-9.85 inches)
- Wingspan— 58.42 cm (23.0 inches)
- Mass— about 150 grams
- Males are typically slightly larger than females.
- Round head, lacks ear tufts.
- Distinct oval facial ruff, framed by a broad, puffy white eyebrow.
- Eyes contain a bright yellow iris.

Where are owls found?

- Dry, open, short grass, treeless plains.
- Dependent on fossorial mammals. (ground squirrels, prairie dogs, badgers, etc.) to construct burrows.
- Human dominated landscapes: golf courses, airports, agricultural fields.

Identifying an active burrow:

- Owls use burrows constructed by ground squirrels, badgers, coyotes and tortoises. They can also use pipes, culverts, and ditches.
- Presence of excrement (whitewash) near entrance to burrow.
- Burrowing owls frequently decorate entrance of burrows with cow or horse manure, feathers, vegetation and trash items.

How to avoid them:

- Scan ahead prior to arriving at a sign location.
- If burrowing owls are observed within the project area, stop and move at least 100 feet beyond the owl or occupied burrow before resuming work.

If you think your work may potentially impact a Burrowing Owl or active burrow, please stop.

Move at least 100 feet from the animal or burrow before resuming work.

If you have any questions or think you have a borrowing owl or active burrow on your work site please

contact: the project biologist or Coby Teal, Biology Team Lead

cell: (928) 304-0487 email: cteal@azdot.gov

Source: Arizona Game and Fish Department Animal Abstract: Western Burrowing Owl. Heritage Data Management System

(revised April 24, 2024)

**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 or participation or community identification).

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

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

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each

construction trade in which it has employees in the covered area

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

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

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

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

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

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

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

e. Develop on the job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied 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 on site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

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

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

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

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

l. Conduct, at least annually, an inventory and evaluation at least of all minority and

female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

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

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

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

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

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative actions 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 under utilized).

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

11. The Contractor shall not enter into any Subcontract with any person or firm

debarred from Government Contracts pursuant to Executive Order 11246.

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

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

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to 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 an imitation 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).

TITLE VI / NON-DISCRIMINATION ASSURANCES

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, the *Federal Highway Administration*, 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 performance 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 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 or the *Federal Highway Administration* 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 or the *Federal Highway Administration*, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the *Federal Highway Administration*, may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with request to any subcontract or procurement as the Recipient or the *Federal Highway Administration* may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor or supplier because of such direction, the contractor may request the 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.

TITLE VI / NON-DISCRIMINATION ASSURANCES

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. 1687 *et. seq.*).

NOTICE OF REQUIREMENT 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:

	Minority	Female
Tucson and balance of Pima County Cochise, Graham, Greenlee and Santa Cruz Counties	24.1 27.0	6.9 6.9
Phoenix and balance of Maricopa County Apache, Coconino, Gila, Mohave, Navajo, Pinal, Yavapai and Yuma Counties	15.8 19.6	6.9 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 efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

*** EXECUTIVE ORDER 2009-09 ***
PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS
NONDISCRIMINATION IN EMPLOYMENT BY
GOVERNMENT CONTRACTORS AND SUBCONTRACTORS
(Superseding Executive Order 99-4 and Amending Executive Order 75-5)

[M09-395]

WHEREAS, Executive Order 99-4 was effectuated to assure that persons or entities contracting with the State of Arizona or its political subdivisions comply with the provisions of Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e, et. seq.) and with Arizona's Civil Rights Act (Title 41, Chapter 9, Article 4);

WHEREAS, Executive Order 99-4 correctly states that various religious organizations are exempted from Arizona's Civil Rights Act;

WHEREAS, Executive Order 99-4 does not expressly state the federal and state exemptions for Indian tribes under both the federal and State Civil Rights Acts;

WHEREAS, 42 U.S.C. § 200e(b)(1) exempts tribes from the definition of employer;

WHEREAS, A.R.S. § 41-1461 4 (b)(i) also exempts Indian tribes from the definition of employers to whom the Arizona Civil Rights Act applies;

WHEREAS, Indian tribes across the State have recently begun to experience difficulty contracting with the State, often for money or services to which they are lawfully entitled, as a result of their exclusion from specified exemptions within Executive Order 99-4;

WHEREAS, the Attorney General's Office has in some cases interpreted the existing provisions as requiring tribes to waive rights guaranteed by both federal and State law;

WHEREAS, a modification is necessary to expressly provide that the exemptions found in federal and State law continue in full force and effect;

NOW, THEREFORE, I, Janice K. Brewer, Governor of the State of Arizona, by virtue of the authority vested in me by the Constitution and laws of this State, hereby order and direct as follows:

1. Executive Order 75-5 is hereby amended as follows:

PART I - Non-discrimination in employment by government contractors and subcontractors.

Unless otherwise exempted by federal or state civil rights laws, all government contracting agencies shall include in every government contract hereinafter entered into the following provisions:

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

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, age, color, religion, sex, or national origin. The contractor will take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, age, color, religion, sex or national origin. Such action shall include, but is not limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. The contractor agrees to post in conspicuous

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places available to employees and applicants for employment notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause.

A continued Executive Order No. 75-5 is hereby amended to permit government contractors and subcontractors that are exempted from compliance under Title 41, chapter 9, article 4, Arizona Revised Statutes or 42 U.S.C. § 200e(b)(1), to provide employment preferences consistently with federal and state statutes;

Therefore, Executive Order 75-5 does not apply to Indian tribes. It likewise does not apply to religious organizations with respect to the employment of individuals of a particular religion to perform work connected with the activities of the employer. It also provides that religious organizations may provide employment preferences based upon religion when dealing with a bona fide occupational qualification reasonably necessary to the operation of the religious organization. This is consistent with the provisions of the Civil Rights Act of 1964 (42 U.S.C. 2000e, et seq.). In addition, in the Personal Responsibility and Work Opportunity Reconciliation Act, P.L. 104-193, Congress provided that religious organizations are eligible for the receipt of federal funds on the same basis as other private organizations.

Executive Order No. 75-5 prohibits all other government contractors and subcontractors from discriminating against any employee or applicant for employment because of race, age, color, religion, sex or national origin. Executive Order No. 75-5 further requires all government contractors and subcontractors to take action to insure that applicants are employed and employees are treated during employment without regard to their race, age, color, religion, sex or national origin.

- B. The contractor will in all solicitations or advertisement for employees placed by or on behalf of the contractor state that all qualified applicants will receive consideration for employment without regard of race, age, color, religion, sex or national origin.
- C. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under the Executive Order and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- D. The contractor will furnish all information and reports required by the contracting agency and will permit access to his books, records, and accounts by the contracting agency and the Civil Rights Division for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- E. In the event of the contractor's noncompliance with the nondiscrimination clauses of the contract or with any such rules, regulations or orders of the Arizona Civil Rights Division said noncompliance will be considered a material breach of the contract and this contract may be cancelled, terminated or suspended, in whole or in part, and the contractor may be declared ineligible for future government contracts until said contractor has been found to be in compliance with the provisions of this order and the rules and regulations of the Arizona Civil Rights Division, and such sanctions may be imposed and remedies invoked as provided in Part II of this order, and the rules and regulations of the Arizona Civil Rights Division.
- F. The contractor will include the provisions of paragraphs A through E in every subcontractor purchase order so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to the subcontract or purchase orders the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance, provided, however, that in the event the contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the State of Arizona to enter into such litigation to protect the interest of the State of Arizona.
- G. Each contractor having a contract containing the provisions prescribed in this section shall file and shall cause each of his subcontractors to file compliance reports with the contracting agency or the Civil Rights Division, as may be directed. Compliance reports shall be filed within such times and shall contain such information as the practices, policies, programs and employment policies, programs and employment statistics of the contractor and each subcontract and shall be in form as the Arizona Civil Rights Division may prescribe.
- H. Bidders or prospective contractors of subcontractors shall be required to state whether they have participated in any previous contract subject to the provisions of this order or any preceding similar Executive Order and in such event to submit on behalf of themselves and the proposed subcontractors compliance reports prior to, or as an initial part of negotiation of a contract.
- I. Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor union or an agency referring workers of providing or supervising apprenticeship or training for

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such workers, the compliance report shall include such information from such labor unions or agency practices an policies affecting compliance as the contracting agency or Civil Rights Division may prescribe: provided that, to the extent such information is within the exclusive possession of a labor union or an agency referring workers or providing or supervising apprenticeship or training and such labor union or agency shall refuse to furnish such information to the contractor, the contractor shall so certify the contracting agency as part of its compliance report and shall set forth what efforts he has made to obtain such information.

- J. The contracting agency or the Civil Rights Division shall require that the bidder or prospector contractor or sub-contractor shall submit as part of his compliance report a statement in writing signed by an authorized officer or agent on behalf of any labor union or any agency referring workers or providing or supervising apprenticeship or other training with which the bidder or prospective contractor deals with supporting information to the effect that the signer's practices and policies do not discriminate on the grounds of race, color, religion, sex or national origin, and that the signer either will affirmatively cooperate in the implementation of the policy and provisions of this order or that it consents and agrees that recruitment, employment, and the terms and conditions of employment under the proposed contract shall be in accordance with the purpose and provisions of this order. In the event that the union or the agency shall refuse to execute such a statement, the compliance shall so certify and set forth what efforts have been made to secure such a statement and such additional factual material as the contracting agency or the Civil Rights Division may require.

PART II - Enforcement

- A. Each contracting agency shall be primarily responsible for obtaining compliance with this Executive Order with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the rules of the Civil Rights Division in discharging their primary responsibility for securing compliance with the provisions of contracts and otherwise with the terms of this order and the rules and regulations and orders of the Civil Rights Division issued pursuant to this order. They are directed to cooperate with the Civil Rights Division and to furnish the Division such information and assistance as it may require in the performance of the Division's functions under this order. They are further directed to appoint or designate from among the agency personnel compliance officers. It shall be the duty of such officers to first seek compliance with the objective of this order by conference, conciliation, mediation or persuasion.
- B. The Civil Rights Division may investigate the employment practices of any government contractor if subcontractor of initiate such investigation by the appropriate contracting agency or determine whether or not the contractual provisions specified in this order have been violated. Such investigations shall be conducted in accordance with the procedures established by the Civil Rights Division and the investigating agencies shall report to the Civil Rights Division any action taken or recommended. The Civil Rights Division may receive and investigate or cause to be investigated complaints by employees or prospective employees of a government contractor or subcontractor which alleges discrimination contrary to the contractual provisions specified in Part I of this order. If the investigation is conducted for the Civil Rights Division by a contracting agency, that agency shall report to the Civil Rights Division what action has been taken or it's recommendation with regard to such complaint.
- C. The Civil Rights Division shall use its best efforts directly and through contracting agencies, other interested state and local agencies, contractors and all other available instrumentalities to cause any labor union engaged in work under government contracts or any agency referring workers or providing or supervising apprenticeship or training for it in the course of such work or cooperate in the implementation of the purposes of this order.
- D. The Civil Rights Division or any agency, officer or employee in the executive branch of the government designated by rule, regulation or order of the Civil Rights Division may hold such hearings, public or private, as the Division may deem advisable for compliance, enforcement of educational purposes. The Civil Rights Division may hold or cause to be held hearings in accordance with rules and regulations issued by the Civil Rights Division prior to imposing, ordering or recommending the imposition of penalties and sanctions under this order.
- E. No order for debarment of any contractor from further government contracts under this order shall be made without affording the contractor an opportunity for a hearing.
- F. Sanctions and Penalties. In accordance with such rules, regulations or orders as the Civil Rights Division may issue or adopt, the Civil Rights Division or the appropriate contracting agency may publish or cause to be published the names of contractors or unions which it has concluded have complied or have failed to comply with the provisions of this order and with the rules, regulations and orders of the Civil Rights Division.
1. Contracts may be cancelled, in whole or in part, terminated, or suspended absolutely, or continuation of contracts may be conditioned upon a program for future compliance approved by the contracting agency or the Civil Rights Division: provided that any contracting agency shall refrain from entering into further contracts, extensions or

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other modifications of existing contracts with any noncomplying contractor until such contractor has established and will carry out personnel and employment policies in compliance with the provisions of this order.

2. Under rules and regulations prescribed by the Civil Rights Division, each contracting agency shall make reasonable efforts within a reasonable time limitation to secure compliance with the contract provisions of this order by methods of conference, conciliation, mediation and persuasion before proceedings shall be instituted under this order of before a contract shall be cancelled or terminated in whole or in part under this order for failure of a contractor or subcontractor to comply with the contract provisions of this order.

G. This Executive Order shall become effective immediately of its issuance.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona

Janice K. Brewer
G O V E R N O R

DONE at the Capitol in Phoenix, Arizona this 20th day of October in the year Two Thousand and Nine and of the Independence of the United States of America the Two Hundred and Thirty-fourth.

ATTEST:
Ken Bennett
Secretary of State

"General Decision Number: AZ20260047 05/18/2026

State: Arizona

Construction Types: Highway

Counties: Arizona Counties of
Pima

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

ENGI0012-046 12/01/2024

Rates

Fringes

POWER EQUIPMENT OPERATOR: BULLDOZER.....\$ 35.56
18.12

ENGI0012-053 12/01/2024

Rates

Fringes

POWER EQUIPMENT OPERATOR: TRACTOR.....\$ 35.56
18.12

ENGI0012-078 12/01/2024

Rates

Fringes

POWER EQUIPMENT OPERATOR: (CRANE/DERRICKS).....\$ 39.17
18.12

LABO1184-016 06/01/2025

Rates

Fringes

POWER EQUIPMENT OPERATOR: HORIZONTAL DIRECTIONAL

DRILL.....\$ 31.98
9.26

LABO1184-027 06/01/2025

Rates

Fringes

LABORER: GRADE SETTER.....\$ 29.91
9.26

LABO1184-033 06/01/2025

Rates

Fringes

POWER EQUIPMENT OPERATOR: TRENCHER.....\$ 30.88
9.26

LABO1184-047 06/01/2025

Rates

Fringes

TRUCK DRIVER: CONCRETE.....\$ 30.88
9.26

SUAZ2023-024 11/19/2024

Rates

Fringes

TRUCK DRIVER: WATER.....\$ 24.90
9.43

TRUCK DRIVER: SWEEPER.....\$ 20.24
5.48

TRUCK DRIVER: OIL DISTRIBUTOR.....\$ 29.97
9.43

TRUCK DRIVER: DUMP.....\$ 23.52
0.00

TRAFFIC CONTROL.....\$ 18.68
0.00

POWER EQUIPMENT OPERATOR: SCRAPER.....\$ 26.29
5.90

POWER EQUIPMENT OPERATOR: PAVER/SPREADER/FINISH
EQUIPMENT (ASPHALT, AGGREGATE, & CONCRETE).....\$ 31.47
0.00

POWER EQUIPMENT OPERATOR: OILER.....\$ 32.22
9.23

POWER EQUIPMENT OPERATOR: MOTOR GRADER/BLADE.....\$ 30.13
5.81

POWER EQUIPMENT OPERATOR: MILLING MACHINE.....	\$ 21.42
7.45	
POWER EQUIPMENT OPERATOR: MECHANIC.....	\$ 31.39
11.72	
POWER EQUIPMENT OPERATOR: LOADER/FRONT END LOADER...	\$ 28.30
9.17	
POWER EQUIPMENT OPERATOR: GRADE CHECKER.....	\$ 24.58
7.18	
POWER EQUIPMENT OPERATOR: FORKLIFT.....	\$ 30.14
12.57	
POWER EQUIPMENT OPERATOR: FIELD EQUIPMENT SERVICEPERSON.....	\$ 35.44
11.45	
POWER EQUIPMENT OPERATOR: EXCAVATOR/TRACKHOE.....	\$ 31.96
8.33	
POWER EQUIPMENT OPERATOR: DRILL RIG/AUGER.....	\$ 33.83
0.00	
POWER EQUIPMENT OPERATOR: CONCRETE SCREED.....	\$ 26.41
7.64	
POWER EQUIPMENT OPERATOR: CONCRETE PUMP TRUCK.....	\$ 43.11
10.87	
POWER EQUIPMENT OPERATOR: COMPACTOR/ROLLER.....	\$ 26.88
7.18	
POWER EQUIPMENT OPERATOR: BROOM/SWEEPER.....	\$ 24.22
4.77	
POWER EQUIPMENT OPERATOR: BOOM/Crane TRUCK.....	\$ 36.99
12.37	
POWER EQUIPMENT OPERATOR: BOBCAT/SKID STEER/SKID LOADER.....	\$ 29.85
8.78	
POWER EQUIPMENT OPERATOR: BACKHOE/BACKHOE & LOADER COMBO/TRACK BACKHOE.....	\$ 26.18
6.73	
PAINTER: SIGN AND DISPLAY ERECTOR.....	\$ 19.84
4.73	
PAINTER: PAVEMENT MARKING.....	\$ 27.76
6.34	
LABORER: PIPELAYER.....	\$ 23.74
2.80	
LABORER: MASON TENDER.....	\$ 23.60
5.34	
LABORER: LANDSCAPE LABORER.....	\$ 19.44
0.00	
LABORER: GUARDRAIL INSTALLER.....	\$ 19.01
2.99	
LABORER: GENERAL.....	\$ 22.97
4.94	

LABORER: FENCE ERECTOR.....\$ 20.98
2.91
LABORER: CONCRETE SAW (HAND HELD/WALK BEHIND).....\$ 25.22
5.08
LABORER: ASPHALT, INCLUDES RAKER, SHOVELER,
SPREADER AND DISTRIBUTOR.....\$ 24.03
8.78
IRONWORKER.....\$ 29.73
16.98
ELECTRICIAN.....\$ 28.71
7.58
CEMENT MASON/CONCRETE FINISHER.....\$ 26.78
6.45
CARPENTER: FORMWORK CONCRETE.....\$ 29.73
10.78
CARPENTER.....\$ 28.08
12.74

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

=====

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>.

Note: Executive Order 13658 generally applies to contracts subject
to the Davis-Bacon Act that were awarded on or between January 1,
2015 and January 29, 2022, and that have not been renewed or
extended on or after January 30, 2022. Executive Order 13658 does
not apply to contracts subject only to the Davis-Bacon Related Acts

regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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

Union Rate Identifiers

A four-letter identifier beginning with characters other than **☐SU☐**, **☐UAVG☐**, **☐SA☐**, or **☐SC☐** denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

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

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for

those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

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

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

Survey Rate Identifiers

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

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

State Adopted Rate Identifiers

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

adopted.

WAGE DETERMINATION APPEALS PROCESS

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

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

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

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

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative

Review Board (formerly the Wage Appeals Board). Write to:
Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

=====
END OF GENERAL DECISION

"



ARIZONA DEPARTMENT OF TRANSPORTATION
PROJECT DELIVERY AND OPERATIONS DIVISION
CONTRACTS AND SPECIFICATIONS GROUP

BID SCHEDULE

CONTRACT # 2017032

TRACS No.	Project No.	Item	County	District	Gross Length	Net Length	Prepared By:
0000 PM IT0 SL69801C	IT0-0-(204)T	LOCAL	PIMA	SOUTHCENT	0.7		Mahfuz Anwar

Highway Termini	Location	Work Description
• SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION	• SAN XAVIER ROAD; LITTLE NOGALE	• System Enhancement (Engineering)

BID SCHEDULE

0000 PM IT0 SL69801C

Item No.	Item Description	Unit	Quantity	Unit Price	Extended Amount
2020025	REMOVAL OF CONCRETE SIDEWALKS, DRIVEWAYS AND SLABS	SQ.FT.	88		
2020029	REMOVAL OF ASPHALTIC CONCRETE PAVEMENT	SQ.YD.	92		
2020047	REMOVAL OF SIGNS	EACH	1		
2020057	REMOVE AND SALVAGE (MESQUITE TREES)	EACH	13		
2020061	REMOVE AND RELOCATE MAIL BOXES	EACH	3		
2020101	REMOVE FENCE	L.FT.	96		
2030201	EXCAVATION (FOR PEDESTRIAN PATH)	CU.YD.	385		
2030904	BORROW (IN PLACE)	CU.YD.	204		
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	328		
4090003	ASPHALTIC CONCRETE (MISCELLANEOUS STRUCTURAL)	TON	334		
6070054	SIGN POST (PERFORATED) (2 S)	L.FT.	108		
6070055	SIGN POST (PERFORATED) (2 1/2 S)	L.FT.	41		
6070057	SIGN POST (PERFORATED) (2 1/2 T)	L.FT.	112		
6070060	FOUNDATION FOR SIGN POST (CONCRETE)	EACH	23		

BID SCHEDULE

0000 PM IT0 SL69801C

Item No.	Item Description	Unit	Quantity	Unit Price	Extended Amount
6080005	REGULATORY, WARNING, OR MARKER SIGN PANEL	SQ.FT.	109		
6080110	REMOVE AND REINSTALL SIGN	EACH	15		
6110200	METAL HANDRAIL (PAG STD DTL 105) (STANDARD LOWER RAIL LOCATION)	L.FT.	217		
7016030	BARRICADE (TYPE 1, TYPE 2, VERT.PANEL, TUBULAR MARKER)	EACH-DAY	5,025		
7016033	PORTABLE SIGN STAND (SPRING TYPE)	EACH-DAY	1,560		
7016035	WARNING LIGHT (TYPE A)	EACH-DAY	1,560		
7016037	WARNING LIGHT (TYPE C)	EACH-DAY	5,025		
7016051	TEMPORARY SIGN (LESS THAN 10 S.F.)	EACH-DAY	1,560		
7016067	CHANGEABLE MESSAGE BOARD (CONTRACTOR FURNISHED)	EACH-DAY	240		
7080011	PERMANENT PAVEMENT MARKING (PAINTED) (YELLOW)	L.FT.	100		
7080301	PAINT BULL NOSE	EACH	1		
8030092	GRANITE MULCH (1-1/4 INCH MINUS)	SQ.YD.	2,006		
8050003	SEEDING (CLASS II)	ACRE	1		
8060066	PRUNING & SHAPING TREES, SHRUBS & PLANTS	L.SUM	1		

BID SCHEDULE

0000 PM IT0 SL69801C

Item No.	Item Description	Unit	Quantity	Unit Price	Extended Amount
8061005	TREE (15 GALLON)	EACH	62		
8061626	CACTUS (BARREL)	EACH	49		
8061631	CACTUS (PRICKLY PEAR)	EACH	65		
8070011	LANDSCAPING ESTABLISHMENT (24 MONTHS)	MONTH	24		
8101021	EROSION CONTROL (WATTLES) (9")	L.FT.	3,588		
9010001	MOBILIZATION	L.SUM	1		
9030008	FENCE (TEMPORARY PRESERVATION FENCE FOR EXISTING TREES)	L.FT.	281		
9080109	CONCRETE SINGLE CURB (PAG STD DTL 209, TYPE 2, H=6")	L.FT.	62		
9080201	CONCRETE SIDEWALK (C-05.20)	SQ.FT.	943		
9080297	CONCRETE SIDEWALK RAMP (TYPE C MODIFIED) (DETAIL B)	SQ.FT.	72		
9080299	CONCRETE SIDEWALK RAMP (DETAIL A)	SQ.FT.	337		
9080402	CONCRETE HEADER (DETAIL C)	L.FT.	188		
9080502	CONCRETE FORD WALL (C-19.10, 1'x2')	L.FT.	399		
9130051	RIPRAP (DUMPED) (D50=6")	CU.YD.	58		

BID SCHEDULE

0000 PM IT0 SL69801C

Item No.	Item Description	Unit	Quantity	Unit Price	Extended Amount
9240010	FORCE ACCOUNT WORK (BIOLOGIST)	L.SUM	1	\$15,000.00	\$15,000.00
9240119	MISCELLANEOUS WORK (ADJUSTED WATER VALVES TO FINISHED GRADE)	EACH	2		
9240129	MISCELLANEOUS WORK (CONCRETE EMBEDDED RIPRAP) (DETAIL E)	SQ.YD.	170		
9240144	MISCELLANEOUS WORK (POST AND CABLE BARRIER) (DETAIL D)	L.FT.	207		
9240181	MISCELLANEOUS WORK (CONTROL OF NOXIOUS PLANTS) (MANUAL/MECHANICAL METHODS)	SQ.YD.	15,907		
9240182	MISCELLANEOUS WORK (CONTROL OF NOXIOUS PLANTS) (HERBICIDE)	SQ.YD.	19,442		
9250001	CONSTRUCTION SURVEYING AND LAYOUT	L.SUM	1		

BID TOTAL :

PROPOSAL

TO THE ARIZONA DEPARTMENT OF TRANSPORTATION:

Gentlemen:

The following Proposal is made for constructing project

0000 PM ITO SL69801C ITO-0(204)T
SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION
(SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19)

in the State of Arizona.

The following Proposal is made on behalf of _____

_____ and no others.

(NAME OF COMPANY, FIRM, OR CORPORATION)

The undersigned hereby certifies that (s)he has been duly authorized to submit a proposal on behalf of the company, firm, or corporation mentioned above; and further certifies, pursuant to Subsection 112(c) of Title 23, United States Code and Title 44, Chapter 10, Article 1 of the Arizona Revised Statutes, that neither (s)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 free competitive bidding in connection with such project and furthermore that no member or employee of the Arizona Department of Transportation is personally or financially interested, directly or indirectly, in the Proposal, or in any purchase or sale of any materials or supplies for the work to which it relates, or in any portion of the profits thereof.

The undersigned certifies that the approved Plans, Standard Specifications, Special Provisions and forms of Contract and Bond authorized by the Arizona Department of Transportation and constituting essential parts of this proposal, have been carefully examined, and also that the site of the work has been personally inspected. The undersigned declares that the amount and nature of the work to be done is understood and that at no time will misunderstanding of the Plans, Specifications, Special Provisions, or conditions to be overcome, be plead. On the basis of Plans, Specifications, Special Provisions, and the forms of Contract and Bond proposed for use, the undersigned proposes to furnish all the necessary equipment, materials, machinery, tools, apparatus, and other means of construction, and labor to do all the work in the manner specified, and to accept, as full compensation therefor, the sum of the various products obtained by multiplying each unit price, herein bid for the work or materials, by the quantity thereof actually incorporated in the complete project, as determined by the State Engineer. The undersigned understands that the quantities mentioned herein are approximate only and are subject to increase or decrease and hereby proposes to perform all quantities of work as either increased or decreased, in accordance with the provisions of the Specifications, at the unit price bid in the Bidding Schedule.

The undersigned further proposes to perform all extra work that may be required on the basis provided in the Specifications and to give such work personal attention and to secure economical performance.

The undersigned further proposes to execute the Contract Agreement and furnish satisfactory Bond within ten calendar days from the date of Notice of Award, time being of the essence. The undersigned further proposes to begin work as specified in the contract attached hereto, and to complete the work on or before expiration of the contract time as defined in the Specifications, and maintain at all times a Payment Bond and a Performance Bond, approved by the State Engineer, in an amount equal to one hundred (100) percent of the total bid. These bonds shall serve not only to guarantee the completion of the work on the part of the undersigned, but also to guarantee the excellence of both workmanship and material and the payment of all obligations incurred, until the work is finally accepted and the provisions of the Plans, Standard Specifications and Special Provisions fulfilled.

12-5901 R03/11

Proposal
Sheet 1 of 2

The undersigned hereby agrees to provide an electronic Proposal Guaranty in the amount and character named in the Advertisement for Bids. The Proposal Guaranty is submitted as a guaranty of the good faith of the bidder, and that the bidder will enter into written contract, as provided, to do the work, if successful in securing the award thereof, and it is hereby agreed that if at any time other than as provided in the Proposal there should be failure on the part of the undersigned to execute the Contract and furnish satisfactory Bond as herein provided, the State of Arizona, in either of such events, shall be entitled and is hereby given the right to retain the said Proposal Guaranty as liquidated damages.

If by a Corporation:

(Seal)

Corporate Name: _____

Corporate Mailing Address: _____ Zip Code: _____

Incorporated under the laws of the State of: _____

By (Signature): _____ Date: _____

President: _____

Secretary: _____

Treasurer: _____

If by a Firm or Partnership:

Firm or Partnership Mailing Name: _____

Firm or Partnership Address: _____

By (Signature): _____ Date: _____

Name and Address of Each Member: _____

If by an Individual:

Signature: _____ Date: _____

Mailing Address: _____



ARIZONA DEPARTMENT OF TRANSPORTATION

SURETY (BID) BOND

(Penalty of this bond must not be less than 10% of the bid amount)

KNOW ALL MEN BY THESE PRESENTS, THAT _____

as Principal, hereinafter called the Principal, and _____

a corporation duly organized under the laws of the state of _____
hereinafter called the Surety, holding a certificate of authority to transact surety business in this State issued by the Director of the Department of Insurance, are held and firmly bound unto the Arizona Department of Transportation, as Obligee, hereinafter called the Obligee, in the sum of Ten Percent (10%) of the amount of the bid of Principal, submitted by Principal to the Arizona Department of Transportation 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.

WHEREAS, the Principal is herewith submitting its proposal for TRACS/Project No.

0000 PM ITO SL69801C ITO-0(204)T
SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION
(SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19)

NOW THEREFORE, if the Obligee, acting by and through its Transportation board, shall accept the proposal of the Principal and the Principal shall enter into contract with the Obligee in accordance with the terms of such proposal, and give such bonds and certificates of insurance as may be specified in the contract documents 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 Obligee 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 is void. Otherwise it remains in full force and effect.

IN WITNESS WHEREOF, we hereunto set our hands and seals:

Principal

Surety

By

By Attorney-in-Fact

Title

Address Attorney-in-Fact

Subscribed and sworn before me
this _____ day of _____, 20 _____.

My Commission expires: _____

**CERTIFICATION WITH REGARD TO THE PERFORMANCE OF
PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE
EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS
APRIL, 1969**

The bidder _____, proposed subcontractor _____, hereby certifies that it has _____, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that it has _____, has not _____, filed with the Joint Reporting committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

(Company)

By: _____

(Title)

Date: _____

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7b (1),) and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5 (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Information concerning Standard Form 100 (EEO-1) is available from:

Joint Reporting Committee
P.O. Box 19100
Washington, D.C. 20036-9100

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

0000 PM ITO SL69801C ITO-0(204)T
SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION
(SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19)

R7/03

**CERTIFICATION WITH RESPECT TO THE
RECEIPT OF ADDENDA**

In the submission of a bid and by the signing of the Proposal, this will certify that the following numbered addenda issued on this project have been brought to my personal attention and furthermore that I understand and agree that those will be made a part of the Contract.

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

PRINT NAME OF CONTRACTOR

SIGNATURE

TITLE

DATE

0000 PM ITO SL69801C ITO-0(204)T
SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION
(SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19)

**ARIZONA DEPARTMENT OF TRANSPORTATION
PARTICIPATION IN BOYCOTT OF ISRAEL CERTIFICATION FORM**

Unless and until the District Court's injunction in Jordahl is stayed or lifted, the Anti-Israel Boycott Provision (A.R.S. § 35-393.01(A)) is unenforceable and the State will take no action to enforce it. This attachment (Participation in Boycott of Israel) is no longer a mandatory part of the offer. Offers will not be evaluated based on whether this certification has been completed.

0000 PM ITO SL69801C ITO-0(204)T
SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION
(SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19)

This Certification is required in response to legislation enacted to prohibit the State from contracting with companies currently engaged in a boycott of Israel. To ensure compliance with A.R.S. §35-393.01, this form must be completed and returned with the bid. The bidder understands that this response will become public record and may be subject to public inspection.

As defined by A.R.S. §35-393.01:

1. "Boycott" means engaging in a refusal to deal, terminating business activities or performing other actions that are intended to limit commercial relations with Israel or with persons or entities doing business in Israel or in territories controlled by Israel, if those actions are taken either:
 - (a) In compliance with or adherence to calls for a boycott of Israel other than those boycotts to which 50 United States Code section 4607(c) applies.
 - (b) In a manner that discriminates on the basis of nationality, national origin or religion and that is not based on a valid business reason.
2. "Company" means a sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, Limited Liability Company or other entity or business association, and includes a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate.
3. "Direct holdings" means all publicly traded securities of a company that are held directly by the state treasurer or a retirement system in an actively managed account or fund in which the retirement system owns all shares or interests.
4. "Indirect holdings" means all securities of a company that are held in an account or fund, including a mutual fund, that is managed by one or more persons who are not employed by the state treasurer or a retirement system, if the state treasurer or retirement system owns shares or interests either:
 - (a) Together with other investors that are not subject to this section.
 - (b) That are held in an index fund.
5. "Public entity" means this State, a political subdivision of this STATE or an agency, board, commission or department of this state or a political subdivision of this state.
6. "Public fund" means the state treasurer or a retirement system.
7. "Restricted companies" means companies that boycott Israel.
8. "Retirement system" means a retirement plan or system that is established by or pursuant to title 38.

All Bidders must select one of the following:

_____ **The bidder does not participate in, and agrees not to participate in during the term of the contract a boycott of Israel in accordance with A.R.S. §35-393.01.**

_____ **The bidder does participate in a boycott of Israel as defined by A.R.S. §35-393.01.**

By submitting this response, the bidder agrees to indemnify and hold the State, its agents and employees, harmless from any claims or causes of action relating to the State's action based upon reliance on the above representations, including the payment of all costs and attorney fees incurred by the State in defending such an action.

_____ Company Name	_____ Signature of Person Authorized to Sign
_____ Address	_____ Printed Name
_____ City State Zip	_____ Title

ARIZONA DEPARTMENT OF TRANSPORTATION
Forced Labor of Ethnic Uyghurs Ban Certification Form

Forced Labor of Ethnic Uyghurs Ban

Please note that if any of the following apply to the Contractor, then the bidder shall select the "Exempt Contractor" option below:

- Contractor is a sole proprietorship;
- Contractor has fewer than ten (10) employees; OR
- Contractor is a non-profit organization.

0000 PM ITO SL69801C ITO-0(204)T
SAN XAVIER DISTRICT OF THE TOHONO O'ODHAM NATION
(SAN XAVIER ROAD; LITTLE NOGALES ROAD TO I-19)

Pursuant to A.R.S. § 35-394, written certification is required to show that the company entering into a contract with a public entity does not use the forced labor, or use 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.

Under A.R.S. §35-394:

1. "Company" means an organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company or other entity or business association, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate, that engages in for-profit activity and that has ten or more full-time employees.
2. "Public entity" means this State, a political subdivision of this State or an agency, board, commission or department of this State or a political subdivision of this State.

In compliance with A.R.S. §§ 35-394 et seq., all bidders must select one of the following:

☐	The bidder <u>does not</u> use, and agrees not to use during the term of the contract, any of the following: • Forced labor of ethnic Uyghurs in the People's Republic of China; • Any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China; or • 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.
☐	The bidder <u>does</u> participate in use of Forced Uyghurs Labor as described in A.R.S. § 35-394.
☐	Exempt Contractor. Select all statements that applies to this Contractor: ☐ Contractor is a sole proprietorship; ☐ Contractor has fewer than ten (10) employees; and/or ☐ Contractor is a non-profit organization.

Company Name

Signature of Person Authorized to Sign

Address

Printed Name

City State Zip

Title