

SPECIAL PROVISIONS

FOR

ARIZONA PROJECT

080 CH BIS T0413 01C

BIS-0(204)T

BENSON – DOUGLAS HIGHWAY (SR 80)

OLD BISBEE TO ERIE STREET

SHARED USE PATH

PROPOSED WORK:

The proposed project is located in Cochise County on SR 80, starting at MP 341.50 and extending north to MP 342.80. The work consists of reconfiguring the existing four-lane roadway into a three-lane roadway and adding a shared use path. The work includes: grading, drainage improvements, asphaltic concrete pavement, pavement marking, signing, and other related work.

PROFESSIONAL ENGINEERS SEALS

These Special Provisions represent the combined efforts of the following organizations:

- (1) Kimley-Horn and Associates, Inc.
- (2) Ethos Engineering, LLC

A representative of each organization has affixed their seal below, which attests that portions of these Special Provisions were prepared under their direction.



Kimley-Horn and
Associates
(Civil)



Ethos Engineering, LLC
(Geotechnical, Paving)

(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, Subgrade Acceptance Chart

Appendix B, Temporary EDA Sign Specifications

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.

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

GENERAL REQUIREMENTS:

Use of Prohibited Products:

The contractor shall not commit any of the following actions:

- (1) Deliver, install, or include any prohibited product under this contract.
- (2) Propose to deliver, install, or include any prohibited product under this contract.
- (3) Enter into a new contract to procure or obtain any prohibited product.

For the purpose of this Section, “Prohibited Product” is defined as any telecommunication or video surveillance equipment, systems, or services produced by:

- (1) Huawei Technologies Company.
- (2) ZTE Corporation.
- (3) Hytera Communications Corporation.
- (4) Hangzhou Hikivision Digital Technology Company.
- (5) Dahua Technology Company.
- (6) Any subsidiary or affiliate of the entities mentioned in this Section.

The contractor shall identify the known subsidiaries and affiliates of the aforementioned from the following Website: https://umd.service-now.com/itsupport?id=kb_article_view&sysparm_article=KB0014132&sys_kb_id=28015b70d96193f

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.

Access Requirements:

The contractor shall maintain access to all side streets, access roads, driveways, alleys, parking lots, and adjacent businesses during their hours of operations. Access to adjacent private driveways shall be provided during all non-working hours. Where property has more than one point of access, no more than one access may be restricted or closed at a time.

The contractor shall coordinate through the Engineer to inform all property and business operators that may be affected by any restrictions at least 72 hours in advance as a result of construction activities of the scope of work, duration of construction activities, and the possible interference with their day to day activities. Any business or residential access restrictions shall be coordinated in writing through the Engineer with the affected businesses or residents at least one week in advance of the restriction.

The contractor shall coordinate with the Engineer to make a good faith effort to make personal contact with affected property owners or business operators. If primary access cannot be maintained, the contractor shall coordinate through the Engineer provide an alternative that will be pre-determined with the business prior to instituting the closure or restriction. If the property owner or business operator cannot be contacted, then the Engineer shall be the sole judge for the approval of any closures or restrictions.

No separate measurement or payment will be made for providing alternatives to maintaining access or maintaining accesses, the cost being considered as included in the price of the contract items.

Access For and Protection of Pedestrians:

Pedestrian access shall be maintained across the construction work zone at all times where pedestrian facilities are present. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features.

At all times the contractor shall conduct operations to safeguard pedestrians within the vicinity of the project. Any holes or trenches left open overnight shall be protected with 6-foot temporary chain link fence. If required or approved by the Engineer, the contractor shall provide Type II barricades and Type A flashing lights connected by warning tape, ribbon rope, a plywood covering or other protection over the holes. No measurement or direct payment for work site protection measures the cost is considered included in price of the contract items.

Maintenance of Project Site:

The contractor shall be responsible for maintaining a clean project site within the project limits including the removal and disposal of all trash, debris and litter during the construction period. No measurement or direct payment will be made for this maintenance, the cost being considered as included in the price of other contract items.

The contractor shall be responsible for maintain existing plant material not identified for removal within the project limits, including crossroads, at all times in accordance with Subsection 806-2.11 of the specifications.

Existing Storm Drains:

The contractor shall be responsible for keeping all existing storm drains open, clean and operational during the construction period. No measurement or direct payment will be made for this maintenance, the cost being considered as included in the price of other contract items.

Verification of Existing Features:

The locations and dimensions of existing roadway features shown on the plans are based on as-built plans, aerial photographs, and field surveys. It shall be the contractor's responsibility to field-verify the information given on the plans wherever that information affects the new work. Significant differences between the measured and plan information shall be submitted to the Engineer prior to proceeding with the work. Minor adjustments to curb staking, catch basin locations, and other elements, to the extent they are required to match existing construction and do not affect the disposition of other project features, will not require review or approval by the Engineer.

Erosion / Sediment Control and Stormwater Quality:

The contractor shall give attention to the impact of the construction operations upon natural landscape, and shall take care to maintain natural surroundings undamaged. The contractor shall minimize soil disturbance by implementing Low Impact Development (LID) methods to control erosion as close as possible to the source of disturbance.

The contractor shall use all means necessary to significantly reduce impacts by staging/stockpiling and carrying out project activities in such a way as to minimize the potential for erosion and discharge of pollutants from the project site.

In addition to what is shown in the plans and/or details, the contractor shall apply perimeter/containment control Wattle Best Management Practices (BMPs) or temporary stormwater quality Control Measures (CMs) on the down-slope perimeter of construction disturbed areas, unpaved on-site staging/storage, and unpaved on-site stockpiling at no additional cost to the Department. The contractor shall also apply wattles parallel to the slope contours and beyond the toe of guardrail end treatment pads newly disturbed slopes. To prevent sediment from bypassing the perimeter control BMP/CM end, the end of the BMP/CM shall be turned up the slopes for a minimum of 3 feet to form an "L" shape. No portion of the BMPs/CMs shall be installed within 6 feet from the edge of the pavement. BMPs/CMs shall not be placed over any driveways or access roads that intersect with the roadway mainline. Unless otherwise called out in the plans/details and approved by the Engineer, such BMPs/CMs shall not be placed on the flow path of inlets and outlets of drainage facilities. All BMPs/CMs shall be installed in accordance with the manufacturer's instructions. Moreover, perimeter/containment control BMPs/CMs shall be applied outside and above adjacent wetlands, as well as water courses unless otherwise called out in the plans/details and approved by the Engineer. The contractor shall adjust the field layout of erosion control and

sediment prevention elements according to the actual limits of soil/ground disturbance as approved by the Engineer. The contractor shall also observe ADOT traffic safety standards when installing perimeter/containment control BMPs/CMs in the traffic clear zone/recovery area.

With the approval of the Engineer, the contractor may choose to replace straw/excelsior Wattles/Logs with equivalent or enhanced BMP/CM products of compost Logs/Wattles, bio-socks, filter socks, compost socks, or compost tubes covered with dense geotextile fabric as the outer layer at no additional cost to the Department. Such replacement may be applicable to protect sensitive biological resources (native species and/or habitats) within the project limit or its vicinity. The color of BMP/CM products of compost Logs/Wattles, bio-socks, filter socks, compost socks, or compost tubes shall be harmonized with the natural surrounding existing ground cover as approved by the Engineer in accordance with the ADOT construction Professional Landscape Architect's (PLA's) evaluation. Black color exterior surface layer of such compost BMP/CM products shall be prohibited. For paved or rocky surface, the compost perimeter/containment control and stormwater quality protection BMPs/CMs shall have enough weight so that no staking shall be required for flat construction zones, and gentle slopes of less than five percent. The equivalent compost BMP/CM products stated above shall demonstrate the same or better stormwater pollutants loading/filtering capacities as well as qualities in comparison with straw/excelsior Wattles/Logs. All fabric materials of compost perimeter/containment control and stormwater quality protection BMPs/CMs shall be biodegradable. No separate measurement or direct payment will be made for the replacement of the straw/excelsior Wattles/Logs with compost BMP/CM products; the cost being considered is included in the price of the respective contract item of Wattles/Logs.

Compost material used for perimeter/containment control and stormwater quality protection BMPs/CMs shall not discharge harmful level of pollutants/nutrients that impair stormwater quality. The Engineer shall randomly sample/exam a minimum of three compost-filled BMPs/CMs by opening the outer fabric layer. Non-compost materials such as: animal manures/wastes, city biosolids, rocks, tree barks, unspecified wood chips, construction debris, soil clumps, and/or other unspecified inert material shall NOT be allowed within the compost BMP/CM products.

Wattles/logs, silt fences, bio-socks, filter socks, compost socks, or compost tubes shall be deemed as temporary stormwater quality CMs/BMPs. The non-biodegradable and/or non-photodegradable components of such temporary CMs/BMPs shall be removed when the project site has achieved stabilization as approved by the Engineer. Rock materials used for temporary stormwater quality protection CMs/BMPs may be left on-site to cover unpaved disturbed soil area for permanent stabilization as approved by the Engineer. If approved, on-site rock materials shall be flattened and re-graded to match with the final unpaved finished grade.

The contractor is responsible to maintain the functional longevity and good working condition of all stormwater quality protection CMs/BMPs during the entire contract time. No separate measurement or direct payment will be made for the maintenance and/or replacement of such CMs/BMPs to assure manufacturer-specified functionality; the cost being considered is included in the price of the respective contract items.

The contractor is responsible to protect Storm Drain Inlets within the project limits from pollutants/contaminants discharged by construction at no additional cost to the Department.

Fine particles including minor miscellaneous dirt, dust, rock fragments, milled asphaltic concrete (AC) or construction debris that may be associated with stormwater discharges into catch basins / Storm Drain Inlets shall be prevented and controlled to maximum extent practicable (MEP) at no additional cost to the Department. Such compliance measures may include frequent dry vacuuming and/or pavement sweeping during construction to ensure no debris, dirt, dust, and material fragments will be built up within 25 feet from catch basins / Storm Drain Inlets. On-site staging, material storage and stockpiling shall not be allowed within 50 feet from catch basins / Storm Drain Inlets.

All Rock Mulch and Rock Riprap used for erosion/sediment control shall be placed and shaped as shown on the CMs/BMPs' plans/details. Rock Mulch/Riprap materials shall be fractured/crushed rocks in angular shape for effective erosion/sediment control and energy/velocity dissipation as defined in the Section 810 / 913 of Specifications. Unless otherwise called out in the plans/details/estimates or as directed by the Engineer, natural river-run materials, especially the rounded natural river rocks/cobblestones and pebbles are not acceptable. The color of Rock Mulch and Rock Riprap shall be harmonized with the natural surrounding rock/inert artificial existing ground cover material as approved by the Engineer in accordance with the ADOT Construction PLA's evaluation.

During construction, the contractor shall minimize vehicular travel or equipment operation on the unpaved soil areas to maximum extent practicable (MEP). The contractor shall develop and implement procedures to avoid earth disturbance, soil compaction, and damage to vegetative cover from vehicular travel or equipment operation during inclement weather or unsuitable soil conditions. The contractor shall stabilize all construction disturbed soil areas at no additional cost to the Department. Furthermore, the contractor shall minimize off-site sedimentation including minor miscellaneous dirt, dust, rock fragments or construction debris by eliminating the tracking of such contaminants from construction sites.

No grout, concrete or wash water shall be disposed of within the project limits or its vicinity. The contractor shall install concrete washout CM/BMP as needed and under the direction of the Engineer at no additional cost to the Department. This CM/BMP shall include proper disposal of all excess grout, concrete, and wash water.

The contractor shall not use unpaved areas within the project limits for staging or stockpiling without first installing erosion control and sediment prevention CMs/BMPs and as directed and approved by the Engineer. Staging and stockpiling on the unpaved areas shall be avoided to MEP.

Erosion/Sediment Control beyond the Project Limits:

The contractor shall apply erosion/sediment and water quality protection CMs/BMPs as required by the commercial material source owner and environmental permit standard at no additional cost to the Department.

The contractor shall apply erosion/sediment and water quality protection CMs/BMPs for off-project-site staging, material storage, maintenance yard, disposal spots, and stockpiling areas

as required by the facility owner and environmental permit standard at no additional cost to the Department.

If the contractor elects to obtain off-project site for staging, stockpiling, material storage, maintenance yard, or waste disposal, the contractor shall meet the requirements for erosion control, sediment prevention, and stormwater quality protection measures within the written agreements with facility and/or the land owner, as well as environmental permits for such operations.

Environmental Mitigation Measures:

The contractor's commitments are identified in the Environmental, Permits, Issue, 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. In addition, the contractor shall pay attention to the project specific environmental commitments that are specified in Section 10 of the EPIC Plan Sheet 1F.

Street Light Bid Alternate

Refer to the Construction Documents and Bid Schedule for the Base Bid and Additional Bid Alternate information.

There is one add alternate to be considered pending available funding and City needs. The City of Bisbee may not award the alternate.

The Bid Alternate is to install new street lighting through the project as identified at the end of the bid plan set.

(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 may 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:

- (A) 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.

(B) 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 modified to add:

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.

(102SCSGR, 08/15/24)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS:

102.11 Availability of Documents: the first paragraph of the Standard Specifications is modified to add:

(I) Survey Control Sheet.

102.11 Availability of Documents: the second paragraph of the Standard Specifications is revised to read:

The project plans, special provisions, proposal pamphlet, cross sections, earthwork quantity sheets, 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, special provisions, proposal pamphlet, and any applicable reports.

(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.

SECTION 104 SCOPE OF WORK:

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

D) General Traffic Control Information:

The project traffic control shall be constructed in accordance with Part VI of the Manual on Uniform Traffic Control Devices (MUTCD) 2009 Edition with Revisions 1 and 2 and the Arizona Supplement to the 2009 Edition, the Arizona Department of Transportation Traffic Control Design Guidelines (TCDG) 2019 and the project plans and Specifications. The contractor shall establish the traffic control necessary to provide a safe and efficient work zone without unduly delaying traffic. Alterations and modifications to the traffic control concepts included in the project plans and specifications will be considered if they conform to the references listed above.

A specified Traffic Control Plan (TCP) has not been developed as part of the project plans. The contractor shall develop a traffic control plan in accordance with Subsection 701-1 of the specifications. Changes or revision to the TCP and specifications must be submitted and approved by the Engineer in advance of implementation.

All signs in conflict with the construction signs shall be removed or covered in place, as directed by the Engineer. The contractor shall store and reinstall items which have been removed or relocated in a manner approved by the Engineer at no additional cost to the Department.

The temporary removal or covering of existing signs shall be in accordance with Section 701-3.11 and 701-5.10 of the specifications.

Traffic control devices shall not be permitted to remain stockpiled on the shoulder until the next closure. Traffic control devices shall be stored outside of the clear zone a minimum of 30' from the traveled way, 1.5' behind vertical curb, or behind crashworthy protection.

The contractor shall be required to check on all traffic control barricades, signs, and variable message boards twice daily and maintain as needed per the specifications.

The contractor shall reduce the speed limit to 35 mph whenever a lane closure is in place unless otherwise approved by the Engineer.

Pedestrian Access in Work Zones:

This work shall consist of providing a Temporary Access Control Plan. This plan shall consist of identifying a Temporary Pedestrian Accessible Route (TPAR) and features needed to assist pedestrians, bicycles and non-motorized vehicles with safe movement within and around the construction zone. This work shall be done in accordance with contract provisions and the following requirements:

The contractor shall develop and provide for a continuous Temporary Pedestrian Accessible Route (TPAR) for this project. The TPAR shall clearly address all non-motorized users in the construction zone. The contractor shall submit this plan to the Engineer for acceptance at the pre-construction meeting.

Pedestrian Access (A): The TPAR must have a minimum width of 48 inches (4 feet) and guide pedestrians around the work zone by using devices such as signage, barricades and temporary curb ramps. The contractor may provide an alternate route that is accessible within two (2) blocks (approximately 850 feet) offset of the closed construction area provided it is within the ADOT right of way. To the maximum extent feasible, the TPAR shall be provided on the same side of the street as the disrupted route. Where TPARs are exposed to adjacent construction, excavation drop-offs, traffic or other hazards, they shall be protected with pedestrian barricade or channelizing device(s). All TPARs must have a smooth, level, slip resistant surface and shall meet applicable requirements of the Public Right-of-Way Accessibility Guidelines (PROWAG).

Pedestrian Access (B): The contractor shall schedule and coordinate replacement of the pedestrian access to accommodate the needs of businesses and residences. Existing sidewalks shall be left in-place until such time that it is required to remove them to accommodate new construction. Pedestrian access may be provided to businesses without alternate public entrances. The contractor must provide a continuous TPAR for all areas disrupted by construction throughout all phases of construction.

Pedestrian Access (C): For technical provisions on TPAR, the contractor is directed to Chapter 6D of the MUTCD and the Guidelines for Accessible Public Rights-of-Way at <http://www.access-board.gov/prowac/draft.htm>.

Traffic control devices must allow for an accessible route through the project. Pedestrian barricades and channelizing devices used for TPAR shall be continuous, stable and non-flexible and shall consist of a wall, fence or enclosure(s). The base of any traffic control devices shall be continuous raised barrier of no more than 6 inches in height and must allow for drainage. The purpose of this barrier is to provide a continuous wayfinding device for the visually impaired; therefore, the barrier shall not have any points that might catch a person who is using a cane for a guide. The devices shall provide a continuous surface or upper rail at a minimum of 3 feet above the ground or walkway surface. Support members shall not protrude into the path. Whenever possible, the TPAR shall only utilize in-place street crossings. TPAR must be regularly inspected and updated depending on project staging.

No pedestrian curb ramp or blended transition work shall occur concurrently at adjacent intersections. The contractor will stage work so that work only occurs on one side of the street and at every other intersection, unless otherwise directed by the Engineer.

The contractor shall be responsible for maintaining the TPAR within this project. The contractor

shall furnish the name, address and phone number of at least one individual responsible for the placement and maintenance of the TPARs. This individual shall be “on call” 24 hours per day, seven days per week during the times any devices furnished and installed by the contractor are in place. The required information shall be submitted to the Engineer at the pre-construction meeting. The contractor shall be expected to answer calls immediately and begin corrective measures needed within one hour. If the contractor is negligent in correcting the deficiency within one hour of notification, the contractor shall be subject to a monetary deduction at the rate of \$55.00 per hour when only one residence or location is affected and at a rate of \$55.00 per hour in all other cases that the Engineer determines the contractor has not complied.

Only one side of the street may be disrupted at a time for pedestrian curb ramp, driveway or sidewalk construction.

Rope, tape or plastic chain strung between devices is prohibited since these are not detectable for the disabled using a cane.

No measurement will be made of the various items that constitute Temporary Pedestrian Access Control Plan or identifying the need for a TPAR, but all such work shall be construed to be included in the traffic control items which will include all costs of installing, maintaining, removing and relocating the individual devices.

At all times, the contractor shall conduct the construction activities to safeguard pedestrians and vehicular access in the vicinity of the project.

The contractor shall maintain existing pedestrian facilities within the project limits during construction. If existing facilities cannot be maintained due to construction activities, the contractor shall provide provisions to safely divert pedestrian traffic as part of the TCP.

The contractor shall not use high level flag trees for this project unless the contractor can prove these devices meet the requirements for NCHRP 350 or MASH (AASHTO Manual for Assessing Hardware).

For each changeable message board used on the project but not located in a protected location, the contractor shall position ten (10) Type 1 or Type 2 barricades – but not vertical panels – each barricade with an affixed Type C steady-burn warning light for nighttime use – around the changeable message board. The contractor shall only position changeable message boards where and when approved by the Engineer. All messages on changeable message boards shall be approved by the Engineer prior to being displayed.

The nearest edge or corner of a sign shall be approximately 6 feet from the nearest edge of pavement for all temporary signs. The minimum sign mounting height from the bottom of each sign to the near edge of the pavement shall be five (5) feet for signs mounted on portable sign stands unless the manufacturers of the portable sign stands certify a mounting height less than 5 feet for those devices will meet the requirements of NCHRP 350 or MASH.

The retroreflective sheeting on all traffic control signs, barricades, vertical panels and other work zone traffic control devices, except orange signs and delineation for impact attenuators, shall meet the criteria established for Type IV, Type VIII, Type IX or Type XI sheeting in Section 1007 of the specifications. All orange signs and delineation for impact attenuators shall have

fluorescent reflective sheeting and shall meet the criteria established for Type VIII, Type IX or Type XI sheeting in Section 1007 of the specifications.

Type A flashing warning lights shall be mounted on top of all construction signs used at night except "END ROAD WORK THANK YOU" (G20-2AZ).

Channelization devices shall be placed as prescribed in Part 6 of the 2009 MUTCD with ADOT Supplement, but shall not be placed at greater than 40 feet on-center on tapers and 80 feet on-center on tangents.

One Type C steady-burn warning light shall be mounted on each channelizing device used for channelization at night.

Construction signs shall not be displayed to traffic more than 24 hours prior to the actual start of construction. These signs may be installed sooner but they must be completely covered or turned away from traffic. These signs may not block or impede business driveways or impede temporary pedestrian access routes. The cost for completely covering or turning them shall be considered part of the sign installation cost. No further compensation will be made. These signs shall be removed within 24 hours after the completion of construction activities.

All warning signs used for this project shall have black letters on an orange background.

The contractor may substitute Type 1 barricades for Type 2 barricades as long as the reflective area on the top panel of each Type 1 barricade is equivalent or greater than the reflective area of a Type 2 barricade.

Under no circumstances shall the contractor utilize tubular markers or cones for channelizing devices for lane closures or lane shifts during nighttime activities.

E) Schedules for Daily Traffic Control Activities:

The contractor shall provide a schedule of daily activities and corresponding traffic control schemes. The information shall be provided in advance of or during the weekly construction meeting in accordance with the requirements of Subsection 108.03 of the specifications and shall specify the limits of the work activities and related traffic control plan by location, direction, and time.

All lane closures will be subject to the following:

- All work requiring a lane closure shall have a TCP.
- Any exceptions must be approved by the Engineer.
- All work requiring a lane closure shall be performed during the allowable lane closure periods shown in Table 104-1 or Table 104-2 below.
- Any exceptions must be approved by the Engineer.

Table 104-1 – ALLOWABLE SHORT-TERM CLOSURE PERIODS		
Roadway	Weekdays	Weekend

	(Monday – Friday)	(Saturday - Sunday)
SR 80 Single Lane Closure	6:00 AM – 6:00 PM	None
SR 80 Full Road Closure	None	None

Table 104-2 – ALLOWABLE LONG-TERM CLOSURE PERIODS	
Roadway	Closure Duration
Dart Road On-Ramp Closures	10 Working Days
SR 80 WB Single Lane Closure	50 Working Days

- All proposed lane closures shall be submitted to the Engineer at least seven calendar days in advance of the closure, unless otherwise approved by the Engineer.
- No lane closures will be allowed during Holidays as defined below.

Holidays

- The contractor shall not schedule a closure to begin prior to a holiday so that the restriction would be in place through the stated holiday.
- Holidays are from 12:00 PM of the last working day prior to the holiday or major event until 6:00 AM of the first working day following the holiday. When holiday falls on Tuesday, the Monday before the holiday is considered part of the holiday. When the holiday falls on a Thursday, the Friday following the holiday is considered part of the holiday.
- 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

(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.

(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:

- (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.

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, 02/15/11)

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

106.15 Domestic Materials and Products:

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

All manufacturing processes to produce 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, 12/21/23)

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

106.17 Construction Materials:

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

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

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

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

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

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

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

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

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.

(107LPAINS, 08/02/19)

SECTION 107 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC:

107.14 Insurance: of the Standard Specifications is modified to add:

City of Bisbee shall be named as an additional insured on the certificate of insurance.

(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.

(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:

SOUTHEAST DISTRICT

Safford Area:

(928) 432-4916 2082 E. US Hwy. 70
Safford, AZ 85546

Globe Area:

(928) 402-5600 Hwy 60, Box 2717
(928) 402-5608 Globe, AZ 85502

Email address:

southeastpermit@azdot.gov

The following utility companies have facilities in the area but are not anticipated to be in conflict:

Company Name	Contact Person	Phone Number
APS	Omar Mancinas	520-364-1554
Arizona Water	Tina Vo	602-240-6860
CableOne	Christopher Guthrey	928-812-2888
Southwest Gas	Oswaldo Lopez	520-368-4364

The following utility companies have facilities in conflict with the proposed construction and adjustments and relocations will be completed prior to project

construction:

Lumen

Chad Dalton (520) 891-1726

Company	Existing Station	Conflict(s)	Conflict Resolution	Anticipated Completion Date
Lumen	Approximately 534+50	Handhole	CenturyLink/Lumen to Relocate	Coordination in Progress

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:

- (10) Stopped the discharge;
- (11) Repaired the damaged pipe;
- (12) Restored normal service; and
- (13) 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.

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 contract will be 175 calendar days, and will be known as the "Contract Time."

(108RSLD, 06/19/25)

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 incompleteness 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.

(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.

(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

(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.

(109BITUMADJ, 06/19/25)

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

109.16 Bituminous Price Adjustment:

(A) General:

The term "bituminous material" as used herein shall include asphalt binder, asphalt rubber and emulsified asphalt.

The Department will adjust monthly progress payments as appropriate for market fluctuations in the price of bituminous material.

A price for bituminous material will be determined monthly by the Department based on the selling prices published by the Asphalt Weekly Monitor, a publication of Poten & Partners, Inc. The price will be the arithmetic average of the high and low selling prices for bituminous material shown in the previous four reports for the Arizona/Utah and Southern California regions.

This value will be effective as of the last Wednesday of each month, and will be posted on the ADOT Contracts and Specifications Group website, on or shortly after the last Wednesday of each month.

This price will be deemed the "initial cost" (IC) for bituminous material for projects on which bids are opened during the following month. This price will also be deemed the "current price" (CP) for bituminous material for the following month for projects in construction.

(B) Measurement:

For each item of bituminous material for which there is a specific pay item, and for the bituminous material used in Asphaltic Concrete mixes, an adjustment will be made for each month that a quantity of bituminous material was used on the project.

The IC for the month in which the project was bid will be compared with the CP for the appropriate current month. The CP will be as posted on the Department's website on the last Wednesday of each month, and will be used to adjust costs for bituminous material incorporated into the job during the following month (for example; bituminous material used in May will be adjusted, as specified herein, based on the CP for May as posted on the last Wednesday of April). Any difference in price between these two values will be applied to the quantity of eligible bituminous material incorporated into the work.

Determination of the eligible quantities of bituminous material for adjustment will be based on contractor-furnished invoices, except as described herein.

The tons of emulsified products to which the adjustment will be applicable will be the tons of the emulsified asphalt prior to dilution.

Adjustments in compensation for emulsified asphalts will be made at 60 percent of either the increase or decrease of IC. For emulsified asphalts containing polymer, adjustments in compensation will be made at 66 percent of either the increase or decrease.

The tons of Bituminous Material (Asphalt-Rubber) to which the adjustment is applicable will be 80 percent of the total quantity of the item used. The adjustment is not applicable to the 20 percent of the material which constitutes the crumb-rubber additive.

The tons of Bituminous Material (TR+) to which the adjustment is applicable will be 92 percent of the total quantity of the item used. The adjustment is not applicable to the 8 percent of the material which constitutes the crumb-rubber additive.

The tons of bituminous material in Asphaltic Concrete mixes, subject to price adjustment shall be calculated as follows, based on the approved mix design target values and the quantity of Asphaltic Concrete placed—regardless of the actual percentage of binder incorporated:

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

$$PA = (CP - IC) \times ACP \times F$$

Where: PA = Price Adjustment monetary amount (plus or minus in dollars)
CP = Current index price (dollars per ton)
IC = Initial Cost at time of bid (dollars per ton)
ACP = Asphaltic Concrete Placed (tons)
F = Eligible Asphalt Cement %

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

(1) For mixes without reclaimed asphalt pavement (RAP):

(E) F = Approved Mix Design Target Asphalt Cement %

(2) For mixes with RAP:

(F) $F = \text{Approved Mix Design Target Asphalt Cement \%} - \text{Mix Design RAP Asphalt Cement contribution \%}$

(3) For mixes using PG TR+ Terminal Blend (8 % Crumb Rubber):

(G) $F = 0.92 \times (\text{Approved Mix Design Target Asphalt Cement \%})$

(4) For mixes using Asphalt-Rubber Blend (20 % Crumb Rubber):

(H) $F = 0.80 \times (\text{Approved Mix Design Target Asphalt Cement \%})$

(5) If the quantity of Asphaltic Concrete is measured by volume, the supplemental agreement establishing the method of measurement will specify the manner in which the tons of bituminous material eligible for the adjustment is determined.

(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.

Price adjustments will be calculated using the measurement methods described above. Only the tons of virgin asphalt binder determined by those methods will be subject to a bituminous material price adjustment.

No price adjustment will be made for the RAP binder in the mix.

No price adjustment will be made for the 8% of binder comprising crumb rubber when (TR+) is used.

No price adjustment will be made for the 20% of binder comprising crumb rubber in the asphalt-rubber material blend.

No compensation will be made for changes that may have occurred since the time of bidding and which may be the result of any increase in the IC of bituminous material.

Adjustment in unit prices of items governed by this provision will be made in the next regular monthly progress payment following actual use or application of the bituminous material.

(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) Removal of Pavement: of the Standard Specifications is modified to add:

Upon removal, the existing asphaltic concrete shall become the property of the contractor and disposed of off-site. Asphalt removal and millings may be delivered/disposed of at 940 S Tovreaville Rd at no cost to the agency. Contractor shall contact the below for delivering millings:

Mike Normand, Construction Manager
City of Bisbee, Camp Naco Project
Office: 520.432.9031
Cell: 520.590.0684

SECTION 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS:

202-3.03 (C) Bituminous Pavement Removal By Milling: the title of the Standard Specifications is revised to read:

202-3.03 (C) Bituminous Pavement Removal By Milling (When an Asphaltic Concrete Friction Course is not to be Placed on the Milled Surface):

SECTION 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS:

202-3.04 Removal of Miscellaneous Concrete: of the Standard Specifications is modified to add:

Upon removal, the existing concrete shall become the property of the contractor and disposed of off-site. Concrete may be delivered/disposed of at 1505 Arizona St (Main gate off of Arizona St south of Gold Gulch Rd) at no cost to the agency. Contractor shall contact the below for delivering millings:

Mike Normand, Construction Manager
City of Bisbee, Camp Naco Project
Office: 520.432.9031
Cell: 520.590.0684

ITEM 2020155 REMOVE (SIGN ASSEMBLY):

Description:

The work under these items shall consist of the removal of existing warning, regulatory, guide, route marker signs, signposts, and sign foundations at location as shown on the plans with the requirements of the plans, as specified herein and as directed by the Engineer.

Construction Requirements:

Removal of existing sign assemblies shall conform to the requirements of Section 202-3.06 of the specifications.

Where sign panels, posts and foundation are to be removed and replaced by new signs, the contractor shall not remove the existing signs prior to the completion of the new sign installation but shall remove them within five working days after the installation of the new signs or as directed by the Engineer.

Signs panels and signposts shall be removed in accordance with the requirements of Subsection 202-3.01 of the specifications.

Signpost foundations shall be removed to its full depth in accordance with the requirements of Subsection 202-3.01 of the specifications unless otherwise directed by the Engineer.

Existing warning, regulatory, guide, and route marker signs that are to be removed will be designated by the Engineer.

Method of Measurement:

Removal of sign assemblies shall be measured as a unit for each sign including signpost and foundation).

Basis of Payment:

The accepted quantities of removal of sign assemblies measured as provided above, will be paid for at the contract unit price each, including removal of sign and signpost material and backfill of removed driven or in-ground concrete foundations.

SECTION 203 EARTHWORK

203-2 General: of the Standard Specifications is modified to add:

The subgrade acceptance chart, see Attachment A, shall be used to determine whether subgrade materials are acceptable.

(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 50,

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 type of bituminous material for fog coat shall be SS-1 and shall be applied at the approximate rate of 0.06 gallons per square yard. Blotter material shall be applied at the approximate rate of 2 pounds per square yard.

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:

(A) 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 of 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.

(409AGGR, 06/19/25)

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

SECTION 409 ASPHALTIC CONCRETE (MISCELLANEOUS STRUCTURAL-SPECIAL MIX):

409-1 Description: the first paragraph of the Standard Specifications is revised to read:

The work under this section shall consist of constructing Asphaltic Concrete (Miscellaneous Structural-Special Mix), 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 148 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 85% with at least two fractured faces and minimum 92% with at least one fractured face (plus No. 4 material)
Uncompacted Void Content	AASHTO T 304 Method A	Minimum 45.0%
Carbonates (1)	Arizona Test Method 238	Maximum 20%
(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. (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	
	1/2 Inch Mix	3/4 inch Mix

	Without Admixture	With Admixture	Without Admixture	With Admixture
1-1/4 Inch	---	---	---	---
1 Inch	---	---	100	100
3/4 Inch	100	100	90-100	90-100
1/2 Inch	90 - 100	90-100	---	---
3/8 Inch	67 - 82	67 - 82	62 - 77	62 - 77
No. 8	40 - 48	41 - 49	37 - 46	38 - 47
No. 40	10 - 18	11 - 19	10 - 18	11 - 19
No. 200	1.5 - 4.5	2.5 - 6.0	1.5 - 4.5	2.5 - 6.0

Fine mineral aggregate shall be obtained from crushed gravel or crushed rock. All uncrushed material passing the No. 4 sieve shall be removed prior to the crushing, screening, and washing operations necessary to produce the specified gradation. The contractor shall notify the Engineer a minimum of 48 hours in advance of crushing the material to be used as mineral aggregate, so all crushing operations can be inspected. Existing stockpile material which has not been inspected during crushing will not be permitted for use unless the contractor is able to document to the Engineer's satisfaction that the mineral aggregate has been crushed. Any material inspected by the Department as crushed material for the project shall be separated from the contractor's other stockpiles and reserved for use throughout the project duration.

The contractor may blend uncrushed fine aggregate up to a maximum of 15 percent of the total aggregate, provided that the composite of uncrushed fine aggregate and crushed fine aggregate meets the requirement for uncompacted void content. The uncrushed fine aggregate shall be 100 percent passing the 1/4 inch and not contain more than 4.0 percent passing the No. 200 sieve. Should the contractor modify the method of producing either the uncrushed or crushed fine aggregate, the Engineer shall be immediately notified and the materials sampled and tested for determination of uncompacted void content.

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 70-28 PM.

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 (70 percent if the average elevation of the project is above 3,500 feet) and a Minimum Wet Strength of 150 psi 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.

A copy of the mix design and representative samples of the mineral aggregate, mineral admixture, and asphalt cement used in the mix design shall be submitted to the Engineer for calibration of the ignition furnace, and for the determination of sand equivalent, fractured coarse aggregate particles, and uncompacted void content. The Engineer shall witness the sampling of the mineral aggregate. The mix design and samples shall be submitted to the Engineer at least five working days prior to the start of asphaltic concrete production.

The sand equivalent, fractured coarse aggregate particles, and uncompacted void content shall meet the requirements specified in Subsection 409-2.01 of the specifications. Additional testing of the uncrushed and crushed fine aggregate for uncompacted void content will be required if the method of producing either fine aggregate is modified.

If the mineral aggregate fails to meet the requirements specified herein, asphaltic concrete production shall not commence, and the contractor shall either submit a revised mix design which is representative of the materials produced or correct the deficiencies in the aggregate stockpiles.

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

<i>Criteria</i>	<i>Requirement</i>	Arizona Test Method
1. Voids in Mineral Aggregate: %, Range	15.0 – 18.0	(See Note)
2. Effective Voids: %, Range	3.8 – 4.2	(See Note)
3. Absorbed Asphalt: %, Range	0 – 1.0	(See Note)
Note: For mixes without RAP, Arizona Test Method 815. For mixes with RAP, Arizona Test Method 833.		

The contractor may make self-directed target changes to the approved mix design within the limits shown below. Requests for self-directed target value changes shall be made in writing and acknowledged by the Engineer prior to start of production. Self-directed target changes shall meet contract requirements for mix design criteria and grading limits.

MEASURED CHARACTERISTICS	ALLOWABLE SELF-DIRECTED TARGET VALUE CHANGES
Gradation (sieve size):	
3/8 inch	±4% from mix design target value
No. 8	±4% from mix design target value
No. 40	±2% from mix design target value
No. 200	±0.5% from mix design target value

Asphalt Cement Content	+0.2% from mix design target value
Effective Voids	None

The contractor may propose target value changes to the approved mix design for the Engineer's approval. The Engineer will determine if the proposed target value change will result in mix production that meets the contract requirements for mix design criteria and grading limits. For acceptance purposes, target value changes will not be retroactive.

In no case shall the approval of mix design changes relieve the contractor of the responsibility for the results obtained by the use of such approved changes.

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.

For acceptance purposes, samples of the asphaltic concrete shall be taken by the contractor, under the observation of the Engineer, at random locations designated by the Engineer. A minimum of one sample shall be taken for each 500 tons of asphaltic concrete. Samples shall be taken in accordance with the requirements of the plate method in AASHTO R 97. The Engineer will immediately take custody of the samples. The material will be tested by the Engineer for the following properties:

Test Property	Test Method
Asphalt Cement Content	AASHTO T 308 (for both Non-RAP and RAP mixes) (See Note)
Gradation	
Marshall Density	AASHTO R 68
Maximum Theoretical Density	AASHTO T 209
Effective Voids	AASHTO T 269
Note: A new calibration of the ignition furnace shall be performed for each mix design, and at any other time the Engineer directs.	

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.

- (I) 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;

(J) 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

(K) 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.

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	No Stripping
Non-Diluted (Full Strength)	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 unless the result of any test varies from the contractor's mix design target value (TV) as follows:

Test Property	Allowable Variation from Target Value	
Gradation (Sieve sizes)		
3/8 inch	TV - 10.0	TV + 10.0
No. 8	TV - 8.0	TV + 8.0
No. 40	TV - 6.0	TV + 6.0
No. 200	TV - 2.5	TV + 2.5
Asphalt Cement Content	TV - 0.60	TV + 0.70
Effective Voids	TV - 2.5	TV + 2.0

Within 25 days after receiving notice of any failing test result(s), the contractor may submit a written proposal to accept the material represented by the failing test result(s), in place, at a reduction in cost. If the failing test result(s) are only on Asphalt Cement Content and/or Effective Voids, the reduction in cost will be \$5.00 per ton. If the failing test result(s) are only on Gradation, the reduction in cost will be \$3.00 per ton. If the failing test result(s) are on Asphalt Cement Content and/or Effective Voids, and also on Gradation, the reduction in cost

will be \$5.00 per ton. The proposal shall contain an engineering analysis of the anticipated performance (i.e. reduction in serviceability, in years) of the asphaltic concrete if left in place. The engineering analysis shall also detail the potential root cause of the problem, any proposed corrective action, and the anticipated effect of such corrective action on the performance. The engineering analysis shall only include acceptance or referee test results, as applicable to the standard specifications. The engineering analysis shall include the expected additional cost to the Department (over original performance life) to maintain the pavement at an acceptable condition. The engineering analysis shall include supporting information such as pictures of the area, control charts, plant and field records, etc. The engineering analysis shall be performed by an independent professional engineer, who is not an employee of the contractor or materials supplier, experienced in asphaltic concrete testing and the development of asphaltic concrete mix designs.

Within three working days, the Engineer will determine whether or not to accept the contractor's proposal. If the proposal is accepted, the asphaltic concrete shall remain in place, at a reduction in cost per ton, as described above, and any necessary corrective action shall be performed at no additional cost to the Department. If the proposal is not accepted, the asphaltic concrete shall be removed at no additional cost to the Department and replaced with asphaltic concrete meeting the requirements of these specifications.

The contractor may request that a sample with a failing test result(s) on gradation and/or asphalt cement content be allowed to remain in place without the completion of an engineering analysis if the application of a self-directed target value change as outlined in section 409-2.04 would have brought the failing test result(s) to within the specified tolerances. This proposal must be made to the Engineer in writing with justification. Once accepted, the material will be allowed to remain in place at the maximum negative pay factor(s). Maximum negative are defined as a minus \$3.00 per ton for mixture properties lots in reject for Gradation only, minus \$5.00 per ton for mixture properties lots in reject for Asphalt Cement Content and/or Effective Voids only, and minus \$5.00 per ton for mixture properties lots in reject for Asphalt Cement Content and/or Effective Voids and also Gradation.

If the asphaltic concrete, represented by failing test results, is used as temporary pavement which will be removed prior to, or after, the completion of construction, the Engineer reserves the right to waive the engineering analysis and accept the material in place, at a cost reduction described above, provided the temporary pavement maintains the functionality of the intended use for the duration of the project.

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 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.

(501PIPE, 01/20/22)

SECTION 501 PIPE CULVERTS AND STORM DRAINS:

501-3.02(A)(1) GENERAL: the last paragraph of the Standard Specifications is revised to read:

Bedding material for all metal pipe shall have a value of resistivity not less than 2,000 ohm-centimeters unless otherwise specified or approved by the Engineer. Bedding material shall have a pH value between 6.0 and 10.0, inclusive, for all metal pipe installations except aluminum. Bedding material for aluminum pipe installations shall have a pH value between 6.0 and 9.0, inclusive. Bedding material shall have a pH value between 6.0 and 12.0, inclusive, for all concrete or plastic pipe installations. Tests for pH and resistivity shall be in accordance with the requirements of Arizona Test Method 236.

ITEM 6080120 SIGN (TEMPORARY EDA SIGN):

Description:

The work under this item consists of supplying, erecting, and maintaining in good condition a project sign according to the specifications set in Appendix B for the duration of construction. The sign shall be removed and disposed of once construction activities have terminated.

Materials:

Materials for the Temporary EDA Sign shall adhere to those specified in appendix B. Any variance from these specifications must be made in writing and approved by the Engineer prior to sign creation.

The concrete foundations at the relocated sign location shall conform to the requirements of Section 607 of the Standard Specifications.

Construction Requirements

Construction shall be in accordance with the requirements of Sections 607 and 608 of the Standard Specifications, and per the requirements in Appendix B.

Method of Measurement:

Sign (Temporary EDA Sign) will be measured by the unit each.

Basis of Payment:

The accepted quantities of Sign (Temporary EDA Sign), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, as specified and described herein and shown in the project plans, including excavation, backfilling, concrete, wood, and all materials required.

No measurement or direct payment will be made for the removal of signs after construction, or replacement of damaged signs during construction, the cost being considered included in the cost of this item.

(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.

(701LUMPSUM, 03/20/25)

SECTION 701 MAINTENANCE AND PROTECTION OF TRAFFIC:

701-1 Description: the first paragraph of the Standard Specifications is revised to read:

The work under this section shall consist of providing flagging services and pilot trucks, and furnishing, installing, maintaining, moving and removing barricades, warning signs, lights, signals, cones, temporary pavement markings and other traffic control devices to provide safe and efficient passage through and/or around the work and to protect workers in or adjacent to the work zone. The work shall be done in accordance with the requirements of Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) and the associated Arizona Department of Transportation supplement. When referred to herein, these documents will be referred to as MUTCD and associated ADOT Supplement.

701-1 Description: the third paragraph of the Standard Specifications is revised to read:

Any traffic control plan included in the project plans shall govern unless an alternate plan, acceptable to the Engineer, is submitted by the contractor. If no traffic control plan is provided or if the contractor desires to deviate from the provisions for maintaining traffic as described in this section, it shall submit to the Engineer for the approval of a proposed sequence of operations and a compatible method of maintaining traffic.

701-3.01 General: of the Standard Specifications is modified to add:

At the preconstruction conference the contractor shall submit a log of all existing signs within the limits of the construction zone. The Department will verify the accuracy of the sign log. Throughout the duration of this project, all existing traffic signs shall be maintained by the contractor in accordance with Subsection 701-3.11 of the specifications.

The contractor shall coordinate all traffic control work on this project with any adjoining or overlapping projects during the construction activities. This may include barricade placement necessary to provide a uniform traffic progress.

701-4.01 General: the first paragraph of the Standard Specifications is revised to read:

The Department will reimburse the contractor for the work of maintaining and protecting traffic on a lump sum basis except for the following Elements of Work:

- 1) Changeable Message Boards
- 2) Temporary Impact Attenuation Devices
- 3) Temporary Concrete Barrier
- 4) Specialty Signs
- 5) Law Enforcement Officers
- 6) DPS Officers
- 7) Civilian Flaggers
- 8) Pilot Vehicles

9) Truck-Mounted and Trailer-Mounted Attenuators

No additional measurement for payment to the contractor will be made for any Elements of Work other than those listed above.

701-4.01 General: the first sentence of the third paragraph of the Standard Specifications is revised to read:

Elements of Work except those reimbursed under the lump sum item will be measured for payment as follows:

701-4.03(E) Limitation of Measurement: the second paragraph of the Standard Specifications is revised to read:

For all items except those reimbursed under the lump sum item, measurement will be made after the initial installation and once weekly thereafter for items in continuous use and at any other times changes are made in the use of traffic control elements listed under Subsection 701-4.01(B) of the specifications. The contractor shall notify the Engineer when any changes are made in the use or location of traffic control elements.

701-4.04 Measurement of Work Elements: Sub-paragraphs (D), (G), (H), (J), (K), (L), and (N) of the Standard Specifications are hereby deleted.

701-5 Basis of Payment for Elements of Work (Complete-in-Place): of the Standard Specifications is modified to add:

All elements of work necessary for the work of maintaining and protecting traffic, excluding Elements of Work listed in Subsection 701-4.01 of the specifications, shall be reimbursed as a single, complete item of work, which price shall be considered full compensation for the work, complete in place, including furnishing, removing, setting up, relocating, taking down, maintaining, and storing the devices.

Lump sum traffic control will be paid according to the schedule shown in Table 701-5 of the specifications.

Table 701-5 Payment Schedule for Lump Sum Traffic Control	
Percent of Total Contract Amount Earned (Excluding Mobilization and Traffic Control)	Allowable Percent of Lump Sum Price for Maintenance and Protection of Traffic
5	20
25	40
50	60
75	80
90*	100
*Or substantial completion	

If the Engineer determines that the final contract amount earned will fall between 75 and 100 percent of the original contract amount, lump sum traffic control will be compensated at 100 percent once final acceptance is achieved.

In the event the Department revises the contract in accordance with Subsection 104.02 of the specifications due to a significant change in the character of work, and the revisions impact the Maintenance and Protection of Traffic, the lump sum price for Maintenance and Protection of Traffic will be adjusted as part of the contract revision under the relevant supplemental agreements.

No adjustments to the lump sum price for Maintenance and Protection of Traffic will be made for suspension of work for seasonal restrictions.

Revisions in the phasing of construction or maintenance of traffic control operations, requested by the contractor, may require traffic control to be installed in accordance with standards and/or designs other than those included in the plans. Such revisions or modifications to the traffic control plans shown in the contract shall be submitted by the contractor for approval by the Engineer. No additional payment will be made for the revised plans requested by the contractor.

701-5.03 Temporary Preformed Markings for Pavement: of the Standard Specifications is hereby deleted.

701-5.05 Obliterate Pavement Marking: of the Standard Specifications is hereby deleted.

701-5.06 Temporary Pavement Markers and Chip Seal Pavement Markers: of the Standard Specifications is hereby deleted.

701-5.07 Obliterate Pavement Markers: of the Standard Specifications is hereby deleted.

701-5.08 Temporary Delineators: of the Standard Specifications is hereby deleted.

701-5.10 Temporary Removal or Covering of Signs: of the Standard Specifications is hereby deleted.

701-6.01 Quantity Variances: of the Standard Specifications is revised to read:

Payment for variances in quantities of items listed in Subsection 701-4.01 of the specifications shall be in accordance with Subsection 104.02 of the specifications, except that, for decreases in quantities, Temporary Concrete Barrier (In-Use) will be considered as a major item.

701-6.03 Channelization Devices: of the Standard Specifications is hereby deleted.

701-6.04 Temporary Signs: of the Standard Specifications is hereby deleted.

701-6.06 Flashing-Arrow Panels, and Changeable Message Boards: the title and text of the Standard Specifications are revised to read:

701-6.06 Changeable Message Boards:

The accepted quantities of changeable message boards, measured as provided above, will be paid for at the unit bid price per day, which price shall be full compensation for the work, complete, including any grading and furnishing, operating, maintaining, and relocating the boards on the work site.

(701FLGSV, 03/20/25)

SECTION 701 MAINTENANCE AND PROTECTION OF TRAFFIC:

701-3.13 Flagging Services: of the Standard Specifications is revised to read:

Flagging services shall consist of 1) Department of Public Safety (DPS) officers with agency vehicles, 2) local enforcement officers with agency vehicles, 3) local enforcement officers without agency vehicles, and 4) civilian flaggers. Local enforcement officers and DPS officers include those who meet the requirements of a Peace Officer under ARS Title 38, generally including anyone certified by the Arizona Peace Officer and Training Board. If available, DPS officers shall be used on Interstate Highways and Urban Freeways. Local enforcement officers will include uniformed officers from local police, tribal police, sheriff departments, or any other agencies that meet the requirements of a Peace Officer under ARS Title 38, generally including anyone certified by the Arizona Peace Officer and Training Board. An agency vehicle is defined as an agency-issued vehicle that meets the requirements of ARS Title 28. If local enforcement officers do not have access to an agency vehicle, a personal vehicle may be used, but it shall have a make and model similar in appearance of an agency vehicle, and shall be equipped with front and rear-facing red and blue lights. The personal vehicle, when applicable, shall be presented to the Engineer for acceptability prior to its use on the project by local enforcement officers. Approval of the personal vehicle will be at the sole discretion of the Engineer.

The contractor shall be responsible to procure DPS officers, local enforcement officers, and civilian flaggers. The Engineer will determine the types and the number of hours of flaggers as needed based on the project needs. Quantities shown on the traffic control plans and/or bidding schedule are approximate only and prepared for bidding purposes. When procuring DPS officers and local enforcement officers, the contractor shall contact the relevant agency at least two days, excluding weekends and holidays, before flagging services will be required. Such contact must be made between the hours of 7:00 A.M. and 5:00 P.M. (M.S.T.).

In the event that local enforcement officers or DPS officers are temporarily unable to provide flagging services, the contractor shall ensure that traffic control is maintained and all personnel are protected, either by providing civilian flaggers or through other means as approved by the Engineer. No adjustments to the contract will be allowed for any delays resulting from the unavailability of local enforcement officers or DPS officers.

Local enforcement and DPS officers shall not work more than 12 consecutive hour work shift without the permission of the State Construction Engineer unless an emergency situation

exists which, in the opinion of the Engineer, requires that the officer remain in the capacity of a flagger.

The contractor shall furnish verification to the Engineer that all civilian flaggers have completed a recognized training and certification program. Flaggers certified by the American Traffic Safety Services Association (A.T.S.S.A.) or by the National Safety Council will be acceptable. Certification through other programs offering flagger training may be allowed upon by the State Construction Engineer's approval. Flagger certification must be current and updated at least once every four years.

701-6.07 Pilot Services, and Flagging Services: of the Standard Specifications is revised to read:

The accepted quantities of pilot vehicles, measured as provided above, will be paid for at the unit bid price for pilot vehicles with driver, which price shall be full compensation for the work, complete in place including, but not limited to, furnishing and maintaining the vehicle and furnishing the driver. Any hour worked after the eight hour regular time will be considered straight-time and will not be paid as overtime pay.

The accepted quantities of flagging services provided by the local enforcement officers (with agency vehicle), DPS officers, and civilian flaggers, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, including the agency vehicle. Any hour worked after the eight hour regular time will be considered straight-time and will not be paid as overtime pay.

The accepted quantities of flagging services provided by the local enforcement officers without an agency vehicle, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work complete in place. Any hour worked after the eight hour regular time will be considered straight-time and will not be paid as overtime pay. No measurement or payment will be paid for the vehicle, regardless of the type of vehicle is an agency vehicle or not, the cost being considered as included in the price of the contract item.

In addition, the Department has estimated an additional two hours of travel time per officer per day in the quantities shown in the bid schedule. However, if more than two hours of travel time per day is required, such additional hours will be compensated in accordance with the requirements of Subsection 104.02 of the specifications if approved by the State Construction Engineer. Travel time is considered to be supplementary to the hours worked by the officer during a work shift.

ITEM 7020010 IMPACT ATTENUATION DEVICE (QUADGUARD M10 OR APPROVED EQUAL)

Description:

The work under these items shall consist of furnishing, and installing impact attenuation devices in conformance with the details shown on the project plans, and in accordance with the special provisions.

Materials:

Impact attenuation devices shall meet the evaluation criteria for Test Level 3 per MASH (AASHTO Manual for Assessing Safety Hardware) for a speed of 62 miles per hour.

Impact attenuation devices shall be QuadGuard M10 or approved equal.

The delineation for the impact attenuators shall conform to the requirements of the Standard Drawing M-34 or in accordance with the manufacturer's recommendations. The retroreflective sheeting type shall conform to the requirements of Section 1007 of the specifications.

The contractor shall provide, at the preconstruction conference, a certificate of compliance, conforming to the requirements of Subsection 106.05 of the specifications. The contractor shall include the project number on the submittal. The contractor shall submit the certification at least two weeks prior to the intended use of the impact attenuator.

In regions that are subject to cold weather conditions, if the water filled impact attenuation device elements that are prone to freezing are used, appropriate antifreeze agents shall be used in accordance with the manufacturer's recommendations. The antifreeze materials must be approved by the ADOT Environmental Planning and may require a leak containment as part of the system. If required by the ADOT Environmental Planning, system components containing chemicals must be labeled per OSHA requirements.

Construction Requirements:

The contractor shall install the impact attenuation device at the locations shown on the project plans, in accordance with the manufacturer's instructions and to the satisfaction of the Engineer.

Any traffic control device which will require impact attenuation device shall be installed by the contractor only after the Engineer's approval of the impact attenuator's use.

At the preconstruction conference meeting, the contractor shall provide in writing, a plan to repair and/or replace any damaged unit during the construction for the Engineer's approval.

Any unit which has been excessively damaged prior to installation, as determined by the Engineer, shall not be used.

Any unit damaged during or after the installation by the contractor's operations shall be repaired or replaced with an undamaged unit by the close of that work shift, at no additional

cost to the Department. Any unit damaged by the travelling public, the contractor shall replace the unit within 36 hours of identifying the damage.

Method of Measurement:

Impact Attenuation Device (QuadGuard M10 or Approved Equal) will be measured by the unit for each impact attenuator furnished and installed.

Basis of Payment:

The accepted quantities of Impact Attenuation Device (QuadGuard M10 or Approved Equal), measured as provided above, will be paid for at the contract unit price per each, which price shall be full compensation for the work including delineation, procurement, and installation, complete in place.

Measurement and payment for an in-line energy absorbing terminal which is damaged by the traveling public will be made in accordance with the requirements of Subsection 109.04 of the specifications.

(704TPMF, 10/17/24)

SECTION 704 THERMOPLASTIC PAVEMENT MARKINGS:

704-2.02(C) Filler: of the Standard Specifications is revised to read:

The filler shall be a white calcium carbonate or equivalent filler.

SECTION 705 PREFORMED PLASTIC PAVEMENT MARKING

705-2.05(C)(1) Color: of the Standard Specifications is revised to read:

The pigments shall be selected and blended to provide a white, yellow, or green marking film which conforms to standard highway colors, when tested according to ASTM D6628, throughout the expected life of the film.

Green: The material shall be manufactured with sufficient pigment to meet the requirements of 23CFR655, Appendix to Subpart F, as modified, and as detailed in the following tables:

Table 5 to Appendix to Part 655, Subpart F—Daytime Color Specification Limits for Retroreflective Pavement Marking Material With CIE 2° Standard Observer and 45/0 (0/45) Geometry and CIE Standard Illuminant D.

Color	1		2		3		4	
	x	y	x	y	x	y	y	x
Green	0.230	0.754	0.266	0.500	0.367	0.500	0.444	0.555

Table 6 to Appendix to Part 655, Subpart F—Nighttime Color Specification Limits for Retroreflective Pavement Marking Material With CIE 2° Standard Observer, Observation Angle of 1.05°, Entrance Angle of +88.76° and CIE Standard Illuminant A.

Color	1		2		3		4	
	x	y	x	y	x	y	y	x
Green	0.230	0.754	0.336	0.540	0.450	0.500	0.479	0.520

(706REFPMR, 11/21/24)

SECTION 706 RAISED PAVEMENT MARKERS:

706-2.02 Reflective Pavement Markers: the title and text of the Standard Specifications is revised to read:

706-2.02 Raised Retroreflective Pavement Markers:

The type of the raised retroreflective pavement markers shall be as shown on the plans.

Permanent raised retroreflective pavement markers shall conform to the performance requirements of ASTM D4280, Type A, B, or E, and shall meet the ASTM D4280 requirements for pavement markers with designation H for abrasion resistance and designation F for flexural strength. A list of approved permanent raised retroreflective pavement markers is shown on the Department's Approved Products List. Copies of the most recent version of the APL are available on the internet from the ADOT Research Center, through its Product Evaluation Program.

Temporary raised retroreflective pavement markers shall conform to the performance requirements of ASTM D4280, Type A, B, or E. Temporary raised retroreflective pavement markers, or permanent raised retroreflective pavement markers used as temporary, shall not be required to meet the ASTM D4280 designation H requirements for abrasion resistance.

706-2.03 Non-Reflective Pavement Markers and Reflectorized Dagmars: the title and text of the Standard Specifications is revised to read:

706-2.03 Non-Reflective Pavement Markers and Retroreflectorized Channel Markers:

Non-reflective pavement markers shall be of the following types:

Type	Color
A	White
AY	Yellow
M	White
MY	Yellow

Retroreflectorized Channel Markers shall be of the following types:

Type	Color
J	White
JY	Yellow

Non-reflective pavement markers and retroreflectorized channel markers shall consist of a heat-fired, vitreous ceramic base and a heat-fired, opaque glazed surface which will produce the required properties. Markers shall be produced from any suitable combination of intimately mixed clays, shales, flints, feldspars, or other inorganic material which will meet the properties herein required. Markers shall be thoroughly and evenly matured and free from defects which will affect appearance or serviceability.

The top surface of the marker shall be in reasonably close conformity with the configuration shown on the plans. Markers shall be convex and the radius of curvature shall be between 3-1/2 and 6 inches, except that the radius of the 1/2 inch nearest the edge may be less. All edges shall be rounded and any change in curvature shall be gradual. The top and sides shall be smooth and free of mold marks, pits, indentations, air bubbles, or other objectionable marks or discolorations.

Non-reflective pavement markers and retroreflectorized channel markers shall meet the following requirements:

Glaze Thickness: Inches	0.005 Minimum
Moh Hardness:	6 Minimum
Directional Reflectance: (White Only)	
Glazed Surface	75 Minimum
Body of Marker	70 Minimum
Yellowness Index: (White Only)	
Glazed Surface	0.07 Maximum
Body of Marker	0.12 Maximum
Color (Yellow Only):	
Purity: percent, range	75 - 96
Dominant Wave Length: μ , range	579 - 585
Total Luminous Reflectance (Y valve)	0.41 Minimum
Compressive Strength: pounds	1,500 Minimum
Water Absorption: percent	2.0 Maximum
Autoclave	Glaze shall not spall, craze or peel

Retroreflectorized channel markers shall have encapsulated lens reflectors conforming to standard manufacturing practices.

706-2.05 Bituminous Adhesive: of the Standard Specifications is revised to read:

The bituminous adhesive for pavement markers shall be a hot-melt adhesive, and shall conform to the requirements of ASTM D4280, Annex A1. A list of approved adhesives is shown on the Department's Approved Products List (APL). Copies of the most current version

of the APL are available on the internet from the ADOT Research Center, through its Product Evaluation Program.

706-4 Method of Measurement: of the Standard Specifications is revised to read:

Raised pavement markers will be measured as a unit for each marker furnished and placed.

706-5 Basis of Payment: of the Standard Specifications is revised to read:

The accepted quantities of raised pavement markers, measured as provided above, will be paid for at the contract unit price for the type designated in the bidding schedule, complete in place, including adhesive and surface preparation.

(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

(731STRSUP, 03/18/21)

SECTION 731 STRUCTURAL SUPPORTS AND FOUNDATIONS FOR TRAFFIC SIGNAL AND HIGHWAY LIGHTING:

731-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing all materials and constructing new supports and foundations for traffic signal and highway lighting systems or modifying poles and mast arms of existing systems at the locations shown on the plans, and in accordance with the details shown on the plans and the requirements of these specifications.

Pole foundations shall include all conduits, elbows, anchor bolts, grounding wires and reinforcing steel. Cabinet foundations shall include conduits, elbows, anchor bolts and clearance pads.

731-2 Materials: of the Standard Specifications is revised to read:

Excavation and backfill shall conform to the requirements of Section 203-5.03 of the specifications. Concrete shall conform to the requirements of Sections 601 and 1006 of the

specifications. Reinforcing steel and wire mesh shall conform to the requirements of Sections 605 and 1003 of the specifications.

Concrete for all foundations shall be Class S and shall have a required 28-day compressive strength of 3,500 pounds per square inch.

731-2.01 BLANK: the title and text of the Standard Specifications is revised to read:

731-2.01 Aluminum Poles and Mast Arms:

(A) General:

Standard aluminum poles assemblies for highway lighting shall include pole shafts, pole bases, and mast arms. Aluminum components of the pole, mast arm, base, and hardware shall conform to the details shown on the plans and in these specifications.

Each aluminum pole and mast arm shall be designed and manufactured as a complete assembly. The assembly shall be furnished and installed as a complete unit that is configured to the necessary dimensions with all the required components including mounting brackets and assembly, ground lugs, rain caps, hand hole covers, anchor bolts, nuts, washers and related hardware and accessories.

The design of the pole assembly (pole, mast arm, and luminaire attachment portion) shall be per the requirements of the 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 6th edition with 2015 interim revisions. The design of the poles, mast arms and luminaire mounting brackets shall be based on a wind speed of 90 miles per hour with a luminaire having an effective projected area of 1.5 square feet and a weight of 55 pounds.

The design shall also be based upon the worst case loading, derived by combining the loads caused by a 20 foot truss mast arm, except for S and T poles, design luminaire, design wind speed and other dead loads, as appropriate. Secondary deflections shall be accounted for in all designs.

Aluminum poles shall have a minimum design life of 50 years.

The pole and mast arm shall be supplied from the same manufacturer and of similar metal properties providing a uniform appearance.

(B) Pole and Mast Arm Assembly Design Parameters:

(1) Pole Shafts:

The tapered pole shaft shall be fabricated from a one-piece, seamless, round tapered tube of Aluminum Alloy 6063-T6, conforming to the requirements of ASTM B221, and shall be full-length heat treated after tapering and welding on the base and hand hole reinforcing to produce a T6 temper. The pole shafts shall either maintain a uniform taper rate from the base of the pole to the pole top or shall be non-tapered. The base plate shall be constructed to match the foundation bolt pattern for standard poles shown in the Standard Drawings for

Aluminum Light Poles. No field splices of pole shafts shall be allowed. The pole shaft shall have an internal vibration damper.

The pole shaft shall be smooth with a uniform brushed sheen finish that is free from all dents, scratches, and shipping/handling marks. Poles that have a finish that is not uniform or that fails to meet the requirements of this specification will be rejected by the Engineer and shall be repaired or replaced to the satisfaction of the Engineer at no expense to the Department in accordance with Subsection 105 of the specifications.

All aluminum poles shall have a hand hole in the base of the poles and shall conform to the details shown on the Standard Drawings, with the exception that the hand hole shall use aluminum components and stainless steel screws.

An aluminum tag shall be permanently attached to the pole above the hand hole. The tag shall state the manufacturer's name, pole type, ADOT standard drawing number, pole length, and gage number.

(2) Truss Mast Arms:

The aluminum truss mast arms shall be fabricated by the same manufacturer as the aluminum pole manufacturer and from Aluminum Alloy 6063-T6 conforming to the requirements of ASTM B221.

The aluminum truss mast arms shall be smooth with a uniform brushed sheen finish that is free from all dents, scratches, and shipping/handling marks. Aluminum truss mast arms that have a finish that is not uniform or that fails to meet the requirements of this specification will be rejected by the Engineer and shall be repaired or replaced by the contractor to the satisfaction of the Engineer at no expense to the Department in accordance with Subsection 105 of the specifications.

(3) Welding:

Welding of all components of aluminum light poles shall conform to the American Welding Society (AWS) D1.2 Specifications for Class I Structures. All aluminum components and welding shall be identified and included in the Certificate of Analysis, which shall state compliance to AWS Specifications.

(4) Break-away Transformer Bases:

Break-away bases for light poles and flasher poles shall be a frangible pole mounting pedestal (base). Break-away bases shall be used on Type A, G, H, I, S, and T poles when indicated on the plans or specifications. Break-away bases shall be fabricated from 356 T6 aluminum alloys and shall have a stainless steel wheel abraded finish. The break-away bases shall have all the necessary hardware to make a complete and functional unit.

Bolts, nuts, and washers connecting the pole to the break-away base shall be fabricated from steel conforming to the requirements of ASTM F3125 Grade A325. Bolts shall be galvanized in accordance with the requirements of ASTM F2329. The 2-3/4 inch x 1/2-inch thick washers shall be zinc mechanically coated per ASTM B695-85 Class 50 or shall be galvanized per the requirements of ASTM F2329.

Welding of all components of aluminum break-away bases shall conform to the AWS D1.2 Specifications

Break-away bases shall be certified by the manufacturer to meet or exceed the change in momentum requirements of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, and to be acceptable for use on Federal Aid projects. The manufacturer shall also certify that the break-away base has been tested and approved by the Federal Highway Administration (FHWA) and that the casting has the same chemistry, mechanical properties, and geometry as the casting used in the tests.

(5) Anchor Bolts, Nuts, and Washers:

All anchor bolts shall be fabricated from steel conforming to the requirements of ASTM F1554 Grade 55, shall be fully galvanized in accordance with the requirements of ASTM F2329, and shall conform to the requirements shown on the Standard Drawings. All anchor bolts shall be submitted for approval and a certificate of analysis shall be provided from the manufacturer that is in accordance with the requirements of Subsection 106.05 of the specifications.

(C) Submittals:

The contractor shall submit a Certificate of Analysis for all aluminum components in accordance with the requirements of Section 106.05 of the specifications. The contractor shall also submit shop drawings that have been sealed and signed by a registered professional engineer that show all the details of the poles assembly units to be furnished and installed. The shop drawings shall be complete in every aspect, including all dimensions, material specifications and appropriate details. The details shall include the configuration of the pole shaft, mast arm and mast arm mounting bracket, base plates, luminaire mounting bracket and the hand hole. All welds shall be shown and identified with standard AWS symbols. The submittal shall include structural calculations along with the name of the engineer(s) who sealed the drawings and performed the calculations.

The contractor shall submit the supporting documents for review by the Engineer. The principal purpose of the review is to verify that suitable structural calculations have been made in the design of the pole and mast arm assembly. The contractor's engineer shall utilize accepted standard engineering principles. If a computer program is utilized, the contractor shall furnish the Engineer with all necessary information, such as formulas and assumptions, to conduct a meaningful review.

The Engineer shall provide written review comments to the contractor. The contractor shall respond to these comments and resubmit the calculations, if required. Fabrication shall not take place until the shop drawings have been approved.

If the contractor utilizes a pre-approved design from ADOT's Approved Product List (APL), submittal of the structural calculations is not required. Shop drawings for APL designs shall be submitted. Drawing numbers for the pre-approved designs found in the APL are available at <https://azdot.gov/business/engineering-and-construction/product-evaluation-program>.

731-2.02 **Standard Steel Poles:** the title and text of the Standard Specifications is revised to read:

731-2.02 **Steel Poles and Mast Arms:**

(A) General:

Standard steel poles assemblies for traffic signals and highway lighting shall include pole shafts, mast arms, and pole bases. Steel components of the pole, mast arm, base, and hardware shall conform to the details shown on the plans and in these specifications.

Each steel pole and mast arm shall be designed and manufactured as a complete assembly. The assembly shall be furnished and installed as a complete unit that is configured to the necessary dimensions with all the required components including mounting brackets and assembly, ground lugs, rain caps, hand hole covers, anchor bolts, nuts, washers and related hardware and accessories.

The design of the traffic signal and lighting supports shall be per the requirements of the 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 6th edition, with the 2015 interim revisions.

All pole lighting supports and mast arms shall be designed to withstand 90 miles per hour wind, and a 3-second Gust. Fatigue analysis is to be per Fatigue Category 2, without galloping. Truck Induced velocity shall be 55 mph wind speed.

Metal parts of standard steel poles and hardware shall conform to the details shown on the plans and the following specifications. Welding shall conform to the requirements of the American Welding Society, Structural Welding Code - Steel, D1.1, latest edition.

(B) Pole and Mast Arm Assembly Design Parameters:

(1) Poles Shafts:

Tapered pole shafts shall be fabricated from sheet steel of weldable grade which shall meet a minimum yield stress, after fabrication, of 50,000 pounds per square inch. A taper rate of approximately 0.14 inches in diameter per linear foot shall be required unless otherwise specified.

Standard pipe pole shafts shall be fabricated from standard weight structural steel which conforms to the minimum strength requirements of ASTM A53, or A500 Grade B. Each section shall be fabricated from not more than two pieces of sheet steel. When two pieces are used, the longitudinal welded seams shall be directly opposite one another. When the sections are butt-welded, seams shall be directly opposite one another. When the sections are butt-welded together, the longitudinal welded seams on adjacent sections shall be placed to form continuous straight seams from base to top of pole. Pole shafts shall be straight, with a permissive variation not to exceed one inch measured at the midpoint.

Pole shafts shall be galvanized in accordance with the requirements of ASTM A123. The visual appearance of the galvanized finish shall be uniform. Discoloration of the galvanized finish such as dark areas, dark streaks, dark rings or transportation handling marks which are

considered excessive by the Engineer shall not be allowed. Pole shafts that have a finish unacceptable to the Engineer shall either be repaired or replaced to the satisfaction of the Engineer at no additional cost to the Department.

All steel poles shall have a hand hole in the base of the poles and shall conform to the details shown on the Standard Drawings. All welds shall be continuous and any exposed welds, except fillet welds, shall be ground flush with the base metal.

A metal tag shall be permanently attached to the pole above the hand hole stating the manufacturer's name, pole type per the Department's plans, pole drawing number, shaft length and gage number.

(2) Mast Arms:

Tapered mast arms for all pole types shall be fabricated from sheet steel with a minimum yield stress of 50,000 pounds per square inch after fabrication. Mast arms shall be fabricated according to the thickness requirements shown on the plans.

A taper rate of approximately 0.14 inches change in diameter per linear foot shall be required unless otherwise specified. All bolts, washers, and nuts for mast arms shall be high strength, shall be fabricated from steel which meets the requirements of ASTM F3125 GR A325, and shall be electro-galvanized in accordance with the requirements of ASTM F2329.

Mast arms shall be galvanized in accordance with the requirements of ASTM A123. The visual appearance of the galvanized finish shall be uniform. Discoloration of the galvanized finish such as dark areas, dark streaks, dark rings or transportation handling marks which are considered excessive by the Engineer shall not be allowed. Mast arms that have a finish unacceptable to the Engineer shall either be repaired or replaced to the satisfaction of the Engineer at no additional cost to the Department.

A metal tag shall be permanently attached on the side of the mast arm near the base stating the manufacturer's name, pole type and name as shown on the plans, mast arm or pole drawing number, length, and gage number.

(3) Steel Pole Extensions and Twin Luminaire Brackets:

Pole extensions and twin luminaire brackets shall be fabricated from new pipe conforming to the requirements of ASTM A53 or A500 Grade B. All welding shall conform to the requirements of the American Welding Society, Structural Welding Code - Steel, D1.1, latest edition. Pole extensions and twin luminaire brackets shall be fully galvanized in accordance with the requirements of ASTM A123. Fabrication of the pole extensions and twin luminaire brackets shall be in accordance with the dimensions as specified in the plans.

(4) Standard Bases:

Poles shall have standard bases fabricated from structural steel plates conforming to the minimum strength requirements of ASTM A36. Exposed surfaces shall be finished smooth and all exposed edges shall be neatly rounded to a 1/8-inch radius. Standard bases shall be galvanized in accordance with the requirements of ASTM A123.

(5) Anchor Bolts, Nuts and Washers:

Standard anchor bolts, washers, and nuts shall be fabricated from steel conforming to the requirements of ASTM F1554 Grade 55. Anchor bolts, washers, and nuts shall be fully galvanized in accordance with the requirements of ASTM F2329. Anchor bolts shall conform to the requirements shown on Standard Drawings.

Welding shall not be performed on any portion of the body of these bolts. Certificates of Analysis conforming to the requirements of Subsection 106.05 of the specifications shall be submitted for high strength bolts, washers and nuts.

(C) Submittals:

The contractor shall submit a Certificate of Analysis for all steel components and welding in accordance with the requirements of Section 106.05 of the specifications. The contractor shall also submit shop drawings that have been sealed and signed by a registered professional engineer that show all the details of the poles assembly units to be furnished and installed. The shop drawings shall be complete in every aspect, including all dimensions, material specifications and appropriate details. The details shall include the configuration of the pole shaft, mast arm and mast arm mounting bracket, base plates, luminaire mounting bracket and the hand hole. All welds shall be shown and identified with standard AWS symbols. The submittal shall include structural calculations along with the name of the engineer(s) who sealed the drawings and performed the calculations.

The contractor shall submit the supporting documents for review by the Engineer. The principal purpose of the review is to verify that suitable structural calculations have been made in the design of the pole and mast arm assembly. The contractor's engineer shall utilize accepted standard engineering principles. If a computer program is utilized, the contractor shall furnish the Engineer with all necessary information, such as formulas and assumptions, to conduct a meaningful review.

The Engineer shall provide written review comments to the contractor. The contractor shall respond to these comments and resubmit the calculations, if required. Fabrication shall not take place until the shop drawings have been approved.

If the contractor utilizes a pre-approved design from ADOT's Approved Product List (APL), submittal of the structural calculations is not required. Shop drawings for APL designs shall be submitted. Drawing numbers for the pre-approved designs found in the APL are available at <https://azdot.gov/business/engineering-and-construction/product-evaluation-program>.

731-2.04 Mast Arms and Tie Rods: of the Standard Specifications is hereby deleted:

731-3.02 Foundations: the sixth paragraph of the Standard Specifications is revised to read:

Signal and lighting pole foundations shall be set flush with the existing or new curb and sidewalk or flush with the finished grade where there is no curb or sidewalk, except in sloped areas they shall be as shown on the plans. The dimensions and locations of foundations shall be as specified on the plans; however, the Engineer may direct that changes be made in

locations due to obstructions or other existing conditions. The contractor shall verify top of foundation elevations with the Engineer prior to foundation construction.

731-3.02 Foundations: the tenth paragraph of the Standard Specifications is revised to read:

Anchor bolts and conduit stubs shall be placed and held in proper alignment, position, and height during the placing and vibrating of concrete. All pole foundations shall set for seven days prior to pole installation.

731-3.02 Foundations: of the Standard Specifications is modified to add:

The stations and offsets for traffic signal poles shown on the plans and in the pole/equipment schedule are approximate. The final location of each pole shall be staked in the field by the contractor and approved by the Engineer, to ensure that the edge of pole foundation is immediately adjacent (1-inch maximum) to the back of sidewalk, back of wheelchair ramp, or integrated into the sidewalk ramp design. The intent of these criteria is to ensure that the pedestrian push button assemblies are accessible to wheelchair-bound pedestrians.

ITEM 7360110 LUMINAIRE (SOLAR LIGHTING ASSEMBLY)

Description

This work consists of furnishing and installing complete solar-powered LED luminaire assemblies as shown on the bid alternative plans and as specified herein. Work includes providing the luminaire, integrated solar/battery system, mounting hardware, pole assembly, wiring, shop drawings, and all performance testing required for acceptance.

General

The Contractor shall furnish all materials necessary to provide a fully functional off-grid lighting system. Work includes, but is not limited to:

- Furnish solar LED luminaire assemblies complete with fixture, battery, solar module, controller, and mounting hardware.
- Furnish and install the designated 20-ft round tapered pole with 1–3.2 ft arm, pole-top mounting.
- Set luminaires plumb and apply required 10-degree tilt per manufacturer's aiming guidelines.
- Provide all interconnect wiring and terminations internal to the assembly.
- Perform a continuous 100-hour operational test. Correct deficiencies at no additional cost.
- No luminaire or solar assembly shall be ordered prior to shop drawing approval.

Materials

A. Luminaire Assembly

The luminaire shall be the SmartLight Opera Single Assembly or approved equal equipped with:

- 624 Wh NiMH battery, rated for extreme temperatures (–40°F to +158°F).
- 190 W high-efficiency solar module, mounted on top of pole.
- Integrated intelligent management/control system for charging, load balancing, and dusk-to-dawn operation.
- Fixture: 2700K, Type T3 distribution, 2700K color temperature.
- Fixture color: Bronze Roman.
- Power assembly color: Black.
- Warranty: 8-year full system warranty; all-night lighting 365 days per year assuming minimal shading.

The system shall be configured for single-fixture operation and shall support 100% output operating all night.

B. Pole and Arm Assembly

- **Pole:** 20-ft round tapered, direct burial, 1–3.2 ft, color Black.
- **Arm:** 1–3.2 ft arm, color Black.
- Pole and arm coatings shall be corrosion-resistant with marine-grade enhanced protection.

C. Mounting & Aiming

- Luminaire mount shall accommodate 10-degree tilt.
- Assembly shall be rated for high-wind environments per manufacturer testing.
- Solar module shall be oriented for optimal performance and free of shading.

D. Electrical Requirements

- System shall be fully solar-powered (off-grid).
- Battery, charging electronics, and protection components shall be fully integrated.
- All connectors shall be sealed and suitable for outdoor solar lighting applications.

E. Environmental Requirements

- Components shall operate from –40°F to +158°F.

- All housings shall be UV-resistant and corrosion-resistant.

Construction Requirements

Installation

- Install luminaire, pole, arm, battery assembly, controller, and solar module per manufacturer's instructions.
- Ensure pole is plumb, tilt is set, and solar module alignment is correct.
- Torque all hardware per manufacturer specifications.

Testing

- Conduct a 100-hour continuous operation test.
- Replace or repair failed components at no additional cost.

Method of Measurement

Luminaire (Solar Lighting Assembly) will be measured as a unit for each luminaire furnished, installed, and operational.

Basis of Payment

Payment will be made at the contract unit price for Luminaire (Solar Lighting Assembly), which shall include the fixture, pole, arm, solar module, battery system, controller, gateway, wiring, hardware, testing, and all work required for complete installation.

(910CBARR, 05/16/24)

SECTION 910 CONCRETE BARRIERS:

910-2 Materials: of the Standard Specifications is revised to read:

Unless otherwise shown on the plans, concrete shall be Class S Portland cement concrete conforming to the requirements of Section 1006 of the specifications with a compressive strength of at least 4,000 pounds per square inch at 28 days.

Reinforcing steel shall be in accordance with the requirements of Section 1003 of the specifications.

Dowels shall be corrosion resistant coated dowel bars conforming to the requirements of AASHTO M 254, Type A.

Grout for pressure grouting the joints of precast barriers shall conform to the requirements of Subsection 602-2.03 of the specifications.

Grout for the bedding of precast barriers shall conform to the requirements of Subsection 913-2.01(D) of the specifications.

Joint sealant shall be a latex sealing compound conforming to the requirements of ASTM C834, applied as recommended in ASTM C1193.

910-3.01 General: of the Standard Specifications is revised to read:

Unless otherwise required by the project plans or Special Provisions, concrete barrier shall be constructed by any of the following methods or combinations thereof, at the contractor's option:

- (A) Cast-in-place by slip-form;
- (B) Cast-in-place by fixed forms; and/or
- (C) Precast

Concrete barriers shall have a smooth, uniform appearance in their final position, conforming to the horizontal and vertical lines shown on the project plans or as ordered by the Engineer.

When concrete barriers are to be constructed on recently completed bridges, the barriers shall be placed after falsework has been released and as long after superstructure construction as the progress of the work will permit, unless otherwise ordered by the Engineer.

Concrete barriers and concrete barrier transitions which are constructed on bridge structures, approach slabs and anchor slabs shall be constructed by cast-in-place, fixed-form methods. Precast or slip-form methods will not be allowed.

When a concrete barrier is not placed on pavement, the supporting material shall be shaped and finished in reasonably close conformity to the lines, grades and dimensions established by the Engineer or shown on the project plans.

The material shall be compacted to at least 95 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.

All exposed surfaces shall be given a Class II finish and shall be in accordance with the requirements of Subsection 601-3.05 of the specifications. Curing of concrete shall be in accordance with the requirements of Subsection 1006-6 of the specifications.

Construction of barrier reinforcement shall conform to the requirements of Subsection 605-3 of the specifications.

Concrete placement shall not be conducted over live traffic.

Barrier markers shall be installed in accordance with the details shown on the plans.

910-3.02 Cast-In-Place by Slip-Form or Extrusion: the title and the text of the Standard Specifications are revised to read:

910-3.02 Cast-In-Place by Slip-Form:

(A) General:

Concrete barriers constructed by using a slip-form machine or similar equipment shall be of well compacted, dense concrete. At the option of the contractor, concrete may be made with materials continuously batched by volume and mixed in a continuous mixer in accordance with the requirements of ASTM C685, except that sampling, testing, and acceptance of the concrete will be in accordance with the requirements of Section 1006 of the specifications.

The contractor may be required to furnish evidence of successful operation of the slip-form machine or other related equipment prior to beginning work. Slip-forming equipment shall be controlled by guidelines or wireless controls set from survey marks shown on the project plans or established by the Engineer. The slip-forming equipment shall be readily adjustable to conform to the proposed grade lines and vertically during the forward motion of the machine to conform to the pre-determined grade line during operations. A grade line gauge or pointer shall be attached to the machine in such a manner that a continual comparison can be made between the barrier being placed and the established grade line as indicated by the offset guide line.

In lieu of the above method for maintaining the barrier grade, the slip-form machine may be operated on rails, forms, or on an existing pavement.

Slip-form barrier will be considered to not require additional finishing if the surface meets the requirements of a Class II finish as described in Subsection 601-3.05 of the specifications and the alignment is satisfactory. If the barrier does not meet these requirements, operations shall be stopped until adjustments are made to the equipment or the concrete mix that will result in an acceptable product. Barriers that cannot be refinished to meet the specifications for a Class II finish shall be removed and replaced at the contractor's expense. Barriers that have unsatisfactory alignment and straightedge tolerance shall be penalized or replaced in accordance with these specifications.

Concrete shall be placed and consolidated by methods that do not cause harmful segregation. To produce the required consolidation, the equipment shall be operated under sufficient speed and uniform restraint to the forward motion.

The concrete shall be of such consistency that after slip-forming operations it will maintain the shape of the barrier without support. The contractor shall ensure the integrity and positioning of all barrier steel reinforcement and conduit throughout slip-forming operations, maintaining adequate clear cover and spacing requirements as shown in the project plans. At the contractor's option, additional barrier steel reinforcement may be added at no additional cost to the Department.

Unless otherwise specified in the Special Provisions, the contractor shall construct a confirmation section of concrete barrier to demonstrate to the Engineer successful slip-forming operations during concrete barrier placement. Confirmation sections of concrete barrier may be waived if approved by the Engineer in writing. The confirmation section shall

be a minimum of 100 feet to 300 feet in length and constructed in accordance with the requirements of the contract documents. The confirmation section will be evaluated for conformance to the requirements of the contract documents by the Engineer. If the confirmation section is determined to be non-compliant, those sections of concrete barrier not in conformance, shall be removed and replaced at no additional cost to the department. In addition, a revised plan for placement of the concrete barrier shall be submitted to the Engineer for approval. A maximum of two confirmation sections may be constructed to demonstrate successful slip-forming operations. If the contractor fails to demonstrate compliance with the contract requirements after 2 completed confirmation sections, the Engineer may disallow use of the slip-form method.

If at any time during concrete barrier placement the Engineer determines the slip-forming operations to be non-compliant with the contract requirements, the contractor may be required to construct additional confirmation sections and/or revise the plan for placement of the concrete barrier in order to demonstrate to the Engineer conformity of slip-forming operations.

(B) Dimensional Tolerances:

- (1) The top of exposed faces of the barrier shall comply with the following tolerances to be accepted at 100 percent of the unit price bid per linear foot.
 - (a) When a 10-foot long straightedge is placed on the top surface of the barrier, it shall not vary by more than 1/4 inch from the straightedge.
 - (b) When a 10-foot straightedge is placed along the face of the barrier, it shall not vary by more than 1/2 inch from the straightedge.
 - (c) The horizontal alignment shall not deviate by more than that allowed in Section 401 of the specifications when placed adjacent to Portland Cement Concrete Pavement.

All other barrier dimensions shall not deviate by more than 1/2 inch from plan alignment.

- (2) The top and exposed faces of the barrier shall comply with the following tolerances to be accepted at 75 percent of the unit price bid per linear foot.
 - (a) When a 10-foot long straightedge is placed on the top surface of the barrier, it shall not vary by more than 1/2 inch from the straightedge.
 - (b) When a 10-foot straightedge is placed along the face of the barrier, it shall not vary by more than 3/4 inch from the straightedge.
 - (c) The horizontal alignment shall not deviate by more than that allowed in Section 401 of the specifications when placed adjacent to Portland Cement Concrete Pavement.

All other barrier dimensions shall not deviate by more than 3/4 inch from plan alignment.

Those portions of the barrier not in compliance with the minimum requirements specified in in this subsection shall be removed and replaced at no additional cost to the Department.

910-3.04 Precast: The first paragraph of the Standard Specifications is revised to read:

Precast concrete barriers shall be cast in accordance with the requirements of Section 601 of the specifications.

(923OJTNG, 09/17/20)

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.

Business Engagement and Compliance Office (BECO):

BECO is responsible for oversight of the OJT program, which targets under-represented segments of the U.S. workforce, including minorities, women and disadvantaged individuals. BECO assesses OJT hour goals on contracts and monitors them to ensure that trainees receive the required number of training hours.

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.

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 BECO 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>

BECO Website:

<https://azdot.gov/business/business-engagement-and-compliance>

923-3 Requirements:

923-3.01 Documentation:

Documentation related to OJT training can be found on the Department's BECO 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.

BECO 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 BECO.

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 9080297 CONCRETE SIDEWALK RAMP (DETECTABLE WARNING AND CONCRETE LANDING) (C-05.30):

Description:

The work under this item consists of installing concrete sidewalk ramp and placing detectable warning strips at the locations shown on the project plans and as specified herein.

Materials:

Concrete sidewalk ramp shall conform to the requirements of Section 908 of the Standard Specifications.

Detectable warning strips shall be Federal Yellow in color.

Detectable warning strips shall conform to the requirements of Subsection 908-2.04 of the Standard Specifications.

The epoxy adhesive shall conform to the requirements of Section 1015 of the Standard Specifications.

Construction Requirements:

Construction shall be in accordance with the requirements of Subsection 908-3 of the Standard Specifications.

The contractor shall secure the detectable warning strip using epoxy adhesive to satisfaction of the Engineer.

Method of Measurement:

Concrete Sidewalk Ramp (C-05.30 Detectable Warning and Concrete Landing) will be measured by the square foot for the number of square feet acceptably constructed within the limits shown on the plans or ordered by the Engineer. Detectable warning strips furnished and installed with the construction of new sidewalk ramps will be included in the respective sidewalk ramp pay items.

Basis of Payment:

The accepted quantities of Concrete Sidewalk Ramp (C-05.30 Detectable Warning and Concrete Landing), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place including the costs of concrete, epoxy adhesive, and the detectable warning strip in place and as shown on plans and specified herein.

ITEM 9240119 MISCELLANEOUS WORK (INCLINOMETER) (ADJUST TO GRADE):

Description:

The work under these items includes replacing the frame and cover for four inclinometers, imbedded in the pavement in accordance with the details and at the locations shown on the project plans, and the requirements of these specifications.

Materials:

Materials shall be in accordance with the requirements shown in Subsection 505-2 of the Standard Specifications. A 12-inch diameter by 12-inch deep galvanized steel skirt shall be utilized as the manhole. A Morrison Bros. Co. Model 418 Access Test Well Manhole 418XAP or approved equal shall be utilized for the manhole.

Construction Requirements:

(A) General:

Replacing the frame and cover at each location shall be in accordance with the requirements shown in Subsection 505-3 of the Standard Specifications. The contractor shall match existing concrete cap dimensions of 30-inches when adjusting to new roadway grade.

The contractor shall lower existing Inclinometers, with each casing estimated to be lowered up to 3-inches. The contractor shall remove and replacement one 18-inch and three 12-inch diameter flush mount traffic rated vaults. All Vaults will be replaced with 12-inch Flush Mounts.

The existing slope inclinometer locations are:

Name	Station	Offset	Latitude ; Longitude
Bisbee #1	551+54.10	18.09' Rt	31.4347 ; 109.896123
Bisbee #2	553+16.90	20.42' Rt	31.43438 ; 109.89593
Bisbee #3	554+96.19	20.02' Rt	31.43404 ; 109.89561
Bisbee #4	557+23.14	23.74' Rt	31.43343 ; 109.89543

No vehicles or heavy construction equipment shall be allowed within a buffer distance of 5 feet of the inclinometer until the new frame and cover have been completely reset to the new pavement or ground surface elevation and approved by the Engineer. All compaction within the 5-foot buffer distance shall be performed with hand compactors only.

The contractor shall allow the Engineer access to all inclinometers at all times, and provide traffic control for the ADOT Geotechnical Design Section and the Engineer's safety when required to perform the tests and calibrations.

(B) Existing Inclinometer Protection Plan:

The contractor shall conduct an inspection to locate all inclinometers and shall develop an inclinometer protection plan. The contractor shall submit two copies of the plan to the Engineer for approval at the preconstruction conference. As a minimum, the plan shall include

details and a description of how the following features will be protected and maintained at all times:

- The existing inclinometer sites during the milling operation and installing the frame and cover
- The existing inclinometer casings and coaxial cable assembly.
- The existing top of casing elevation (the top of casing elevation shall be cut and lowered at direction of the Engineer to provide at least 3-inches of clearance from the bottom of vault lid)
- The integrity of the casing seal (the integrity of the seal includes no cracking of the grout)
- Keeping out sedimentation and debris from the inclinometer casing
- The 5-foot radius buffer distance around the inclinometer.

In order to keep these inclinometers from being damaged, the contractor shall include in the protection plan the types of equipment and the locations of all areas within these station limits intended for staging areas and other construction activities. The contractor's personnel shall be aware of all inclinometer locations to protect them in place until construction activities have terminated. No staging or construction work shall commence prior to the protection plan being approved. No separate measurement or payment or time extension will be granted because of the contractor's failure to submit an approved plan to the Engineer in the time specified.

(C) Inclinometer and Inspections:

The contractor shall notify ADOT Geotechnical Design (Patrice Brun at 480-267-3477) and the Engineer 2 weeks prior to the start of construction activities to schedule an inspection of each existing inclinometer. After the inspections and approval of the inclinometer protection plan, the contractor may start construction work. An ADOT Geotechnical Design representative will be required on site when any cutting of well pipes is to take place for measurements.

When the paving operations and concrete curing periods are complete, the contractor shall notify ADOT Geotechnical Design and the Engineer to schedule a follow-up inspection of each inclinometer to verify that each device is functioning satisfactorily. ADOT Geotechnical Design and the Engineer will schedule a site visit for the follow-up inspection within two weeks of being notified.

(D) Damaged Inclinometers:

(1) Repair:

Should an inclinometer casing, coaxial cable, or grout seal be damaged by the contractor's operations, the Engineer will determine whether the damaged component can be restored to its original condition, or whether the inclinometer must be abandoned and a new installation be required, as specified below. If it is determined that the damaged component can be restored to its original condition, such work shall be performed at no additional cost to the Department. The Engineer will be the sole judge in determining whether an inclinometer can be restored to its original condition, or whether an abandonment and new installation will be required.

Any monitoring well manhole (frame and cover) damaged by the contractor's operations shall be replaced at no additional cost to the Department.

(2) Abandonment and Reinstallation:

If, in the opinion of the Engineer, damaged inclinometer casing, coaxial cable, or grout seal, cannot be properly restored, the contractor shall abandon the existing unit and install a new inclinometer, at a location determined by the Engineer, to the depths and dimensions, and with the same material requirements of the existing inclinometer, and as directed by the Engineer.

This work shall be done at no additional cost to the Department. In addition, the Department will deduct \$25,000 as liquidated damages from monies due the contractor for each abandoned inclinometer. The liquidated damages are for the cost of ADOT and other related expenses incurred during the replacement operations. These expenses will include the cost for ADOT staff and engineering consultant time and equipment, monitoring calibrations, and other related items.

The contractor shall, following notification of the Engineer, abandon the existing inclinometer in accordance with Arizona Administrative Code R12-15-816 and Title 45, Chapter 2 Groundwater Code, and the latest version of ADWR-Well abandonment Handbook.

For ADWR requirements, refer to the following website:

<https://www.azwater.gov/permitting-wells>

The abandonment and new installation shall be performed by a licensed Arizona Well Driller who has a minimum of five years experience installing vertical slope inclinometers and vibrating wire piezometers.

The installation of a new inclinometer shall be in accordance with the requirements of the latest version of ASTM D6230-98 except that the sand and gravel option shall not be used to seal the inclinometer casing. The contractor shall use grout and the grout shall be as recommended by the inclinometer casing manufacturer.

The contractor shall be responsible for the complete installation and operational functionality of a new inclinometer installation to the satisfaction of the Engineer. Final acceptance will be determined in accordance with the latest version of ASTM D6230-98, and USBR 6515. The contractor shall commence the replacement within 7 days of the damage and shall complete all work within 45 calendar days. Calibration of the replaced inclinometer will be performed by the Department. The replacement will not be accepted until the device is successfully calibrated and accepted by the Engineer. The contractor shall ensure that the Engineer is present during the installation.

Method of Measurement:

Miscellaneous Work (Inclinometer) (Adjust to Grade) will be measured by the unit each.

Basis of Payment:

The accepted quantities of Miscellaneous Work (Inclinometer) (Adjust to Grade), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, as specified and described herein and shown in the project plans, including excavation, backfilling, grouting, new lids to match updated vault size, and all materials required.

No measurement or direct payment will be made for the protection of all existing inclinometer sites, restoring or repairing damaged inclinometer devices to their original condition, installing a new inclinometer to replace a damaged device, abandoning all inclinometers and which have been damaged beyond repair, providing access to the inclinometers and, and providing traffic control during testing inspecting and calibrations, the cost being considered included in the cost of this item.

ITEM 9240120 MISCELLANEOUS WORK (BARRIER SIGN MOUNT DETAIL E):

Description:

The work under this item consists of furnishing all equipment, labor and materials required to install Barrier Sign Mount Detail E at the locations shown on the plans and in accordance with the details shown on the plans and the requirements of these specifications.

Materials:

Support materials shall conform to the requirements of ADOT Section 607-2 and in accordance with the details shown on the plans.

Construction Requirements:

At the locations shown on the project plans, the contractor shall install new Barrier Sign Mount Detail E in accordance with the plans, ADOT Section 607 of the Standard Specifications, and as directed by the Engineer.

Method of Measurement:

Barrier Sign Mount Detail E will be measured as a unit for each support furnished and installed.

Basis of Payment:

The accepted quantities of Barrier Sign Mount Detail E 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.

ITEM 9240121 MISCELLANEOUS WORK (RELOCATE BISBEE SIGN):

Description:

The work under this item consists of relocating the Bisbee Sign at Station 536+65 at the overlook to an area within the new median.

Materials:

The concrete foundations at the relocated sign location shall conform to the requirements of Section 607 of the Standard Specifications.

Construction Requirements:

Construction shall be in accordance with the requirements of Sections 607 and 608 of the Standard Specifications.

The contractor shall match existing foundation sizes at the new sign location. The existing sign foundation shall be fully removed from the sign posts and from the existing ground.

Method of Measurement:

Relocate Bisbee Sign will be measured as a complete unit of work as described above.

Basis of Payment:

The accepted quantities of Relocate Bisbee Sign, measured as provided above, will be paid for at the contract per each price, which price shall be full compensation for the work, complete in place including the costs of concrete foundation removal, new concrete foundation, sign repairs from contractor damage, excavation, backfilling, and as shown on plans and specified herein.

ITEM 9240122 MISCELLANEOUS WORK (DYNAMIC SPEED FEEDBACK SIGN ASSEMBLY):

Description:

The work under this item includes furnishing and installing a dynamic speed feedback sign assembly on a new post and foundation at designated locations as shown on the plans.

Materials:

(A) Static Sign:

Static sign shall be yellow and MUTCD-compliant and shall be 30-inch wide by 36-inch tall with the words "YOUR SPEED". The lower portion of the sign shall have a two-digit numeral displayed via a changeable LED sign of 12-inches.

Sign sheeting shall be graffiti resistant, and meet the requirements listed in Section 608-2 of the specifications.

(B) Radar Unit:

Radar unit shall be a doppler radar (FCC part 15 compliant) 24.15GHZ with a range of at least 400 feet. The radar unit shall be capable of detecting speeds from five to 99 mph inclusive.

(C) Digital LED Sign:

Digital LED sign display shall be amber with 12-inch characters. LED sign shall be legible at a nominal distance of at least 600 feet. Numbers shall display beginning at a minimum five mph in one mph increments up to and including a maximum of 99 mph.

(D) Enclosure:

Enclosure shall be NEMA 4R rated, weatherproof, ventilated, and IP65 compliant. Enclosure shall be 12/14 gauge aluminum.

(E) Power Requirements:

Solar panels shall be a minimum of 50W and shall provide sufficient power to maintain 24/7 operation of the of the dynamic speed feedback sign assembly. Batteries shall be provided by the manufacturer and shall be installed in a box mounted on a pole underneath the solar panel. The charger and battery shall be capable of operating in the same temperature range as the LED flashers.

(F) Environmental Requirements:

Operating temperature shall be -40 to 165 degrees F.

(G) Post and Foundation Requirements:

A 12 foot tall Type A Pole and foundation shall be included and installed for this sign assembly per Drawing No. T-SL 4.01.

Construction Requirements:

The dynamic speed feedback sign system shall be furnished and installed on new poles and foundations as shown on the plans and in accordance with these Special Provisions.

The contractor shall ensure dynamic speed feedback sign system is capable of detecting a compact vehicle at least within 400 feet of the sign.

Radar shall provide real-time vehicle detection within 112 milliseconds of vehicle arrival.

The temporary traffic control required for the installation of the dynamic speed feedback sign assembly shall be in accordance with the requirements specified in Section 701 of the specifications.

Method of Measurement:

Dynamic speed feedback sign assembly will be measured as a unit for each sign assembly furnished and installed, including Type A pole and foundation.

Basis of Payment:

The accepted quantities of dynamic speed feedback sign assembly, measured as provided above, will be paid for at the contract unit price per each, which price shall be full compensation for the work, complete in place.

No separate measurement and payment will be made for traffic control, the cost being considered as included in the cost of this item.

ITEM 9240181 MISCELLANEOUS WORK (PORTLAND GREEN PREFORMED THERMOPLASTIC) (0.120"):

Description:

The work under this item shall consist of furnishing all materials, preparing the pavement surface and applying green preformed reflectorized pavement markings to the pavement in accordance with the details shown on the project plans and the requirements of the specifications.

Materials:

Portland Green Preformed Thermoplastic shall conform to the requirements of Subsection 705-2 of the Standard Specifications and the requirements of these specifications.

Construction Requirements:

Construction shall be in accordance with the requirements of Subsection 705-3 of the Standard Specifications.

Method of Measurement:

Portland Green Preformed Thermoplastic will be measured by the square yard for the number of square yards acceptably constructed within the limits shown on the plans or ordered by the Engineer.

Basis of Payment:

The accepted quantities of Portland Green Preformed Thermoplastic, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete-in-place, including necessary pavement cleaning, primer, sealer application and contrasting border as specified.

(924CQC, 09/17/20)

ITEM 9240170 - CONTRACTOR QUALITY CONTROL:

Description:

The work under this item shall consist of furnishing all personnel, materials, supplies, facilities and equipment necessary to perform all certification of test equipment, sampling, testing, and other control actions. The work shall also include the preparation of linear control charts, Weekly Quality Control Reports, and other reports and records as described in Subsection 106.04(C) of the Specifications.

Method of Measurement:

Contractor quality control will be measured for payment on a lump sum basis as a single unit of work.

Basis of Payment:

(A) General:

The accepted quantities of contractor quality control, measured as provided above, will be paid at the contract lump sum price, which price shall be full compensation for the work, complete, as described and specified herein.

Partial payments under this item will be made in accordance with the following provisions:

- (1) The first partial payment price will be the lesser of 25 percent of the contract lump sum price for contractor quality control, or 1 percent of the original total contract bid amount.
- (2) The remaining portion of the lump sum price will be prorated over the duration of the original contract on a monthly basis, and monthly progress payments will be made.

If adjustments to pay items covered under Contractor Quality Control are approved by supplemental agreement, an equitable adjustment to the lump sum amount for Contractor Quality Control may be made. Any adjustment to Contractor Quality Control shall be included in the supplemental agreement and the adjusted amount, less previous payments, will be prorated equally over the remaining contract period, including any related time extensions.

(B) Delinquent Reports:

Failure of the contractor to submit complete and accurate Weekly Quality Control Reports, current to the most recent Wednesday submittal date, will be grounds for the Engineer to deduct monies from the contractor's progress payment.

For each Weekly Quality Control Report that is not complete and accurate, and not submitted to the Engineer by the Wednesday submittal date specified in Subsection 106.04(C)(6), the Department will deduct \$2,500.00 from the progress payment for the current month.

For each delinquent Weekly Quality Control Report submitted to the Engineer within 10 days, excluding weekends and holidays, of the original Wednesday due date, \$2,000.00 will be returned on the next regular estimate, provided all of the requirements specified herein and in Subsection 106.04(C)(6) have been met, and the report is complete and accurate. No deducted monies will be returned for reports submitted more than 10 days, excluding weekends and holidays, beyond the original Wednesday due date.

All deducted monies which are retained by the Department, as specified above, are liquidated damages.

(925SRVY, 08/16/19)

SECTION 925 CONSTRUCTION SURVEYING AND LAYOUT:

925-5 Basis of Payment: the fourth paragraph 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 under items listed in the table below.

ITEM	PREDETERMINED RATE
9250101-ONE-PERSON SURVEY PARTY	\$110 per hour
9250102-TWO-PERSON SURVEY PARTY	\$150 per hour
9250103-THREE-PERSON SURVEY PARTY	\$190 per hour
9250106-SURVEY MANAGER	\$175 per hour
9250105-OFFICE SURVEY TECHNICIAN	\$85 per hour

(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.

(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 δ , kPa	T 315	≥ 1.00 0.90-0.99 0.70-0.89 < 0.70	100 98 95 88 (1)
Dynamic Shear of RTFO Binder: G*/Sin δ , kPa	T 315	≥ 2.20 2.00-2.19 1.60-1.99 < 1.60	100 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 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.

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	-----	-----

TABLE 1005-1b Polymer Modified Asphalt Binder (XX-XXPM)				
Test Property	Test Method	Requirement	Test Result	Percent of Contract Unit Price Allowed
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	AASHTO T 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)		55	60	63	65	57	57
Residue, %, minimum (4)							
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.					

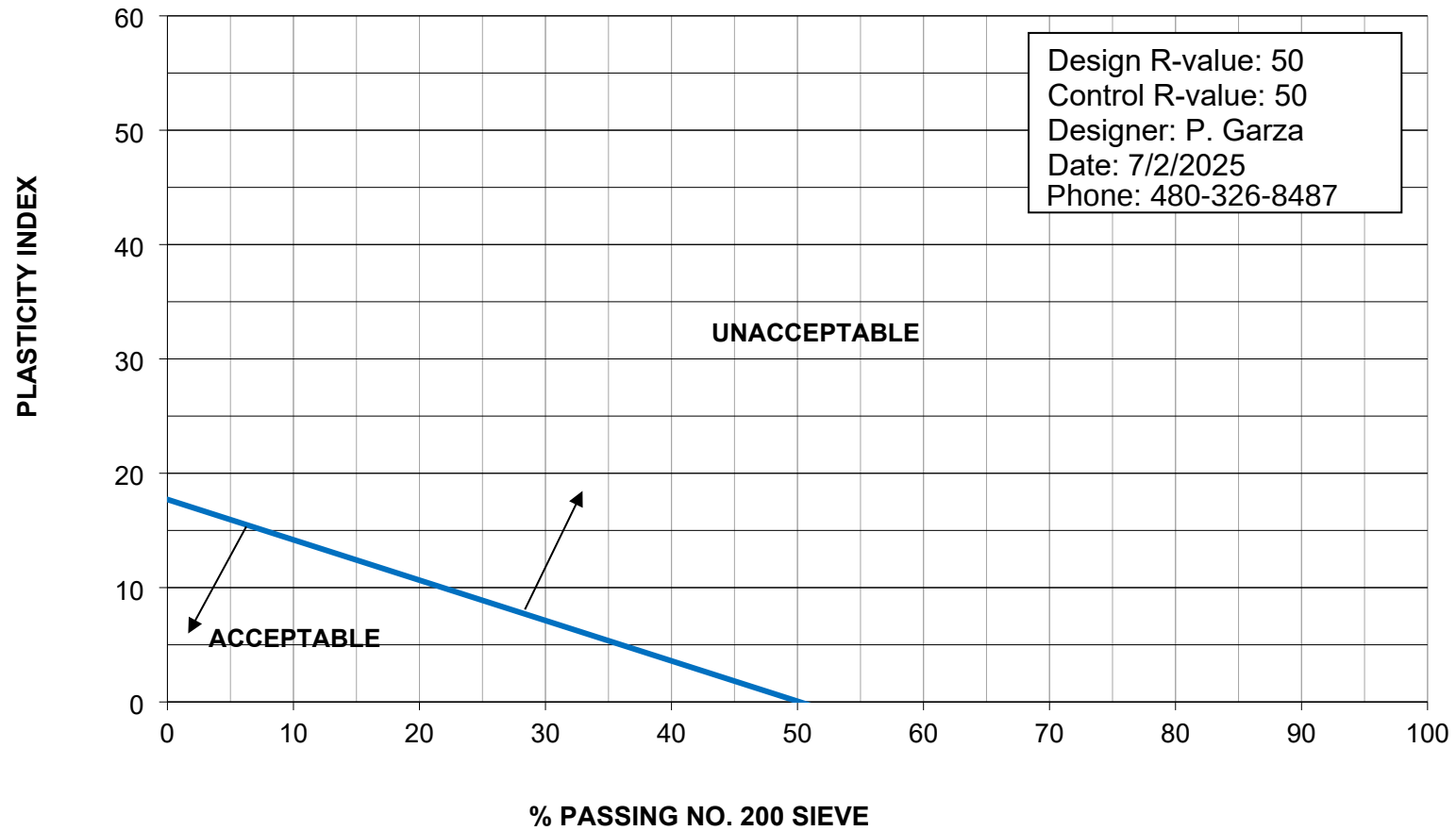
1005-3.07 Other Requirements: the Paving Asphalt row of the table 1005-6 of the Standard Specifications is modified to add:

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
229			232
PG 70-22 PM			233
230			
PG 64-28 PM			

APPENDIX A
SUBGRADE ACCEPTANCE CHART

APPENDIX A - SUBGRADE ACCEPTANCE CHART

SR 80, Old Bisbee to Erie Street



APPENDIX B

TEMPORARY EDA SIGN SPECIFICATIONS

EDA PROJECT SIGN

The Contractor shall supply, erect, and maintain in good condition a project sign according to the specifications set forth below:

EDA SITE SIGN SPECIFICATIONS

Size: 4' x 8' x ¾"

Materials: Exterior grade/MDO plywood (APA rating A-B)

Supports: 4" x 4" x 12' posts with 2" x 4" cross branching

Erection: Posts shall be set a minimum of three feet deep in concrete footings that are at least 12" in diameter.

Paint: Outdoor enamel

Colors: Jet Black, Blue (PMS300), and Gold (PMS7406). Specifically, on white background the following will be placed:

The U. S. Department of Commerce seal in blue, black, and gold;

“EDA” in blue;

“U. S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT

ADMINISTRATION” in black;

“In partnership with” in blue;

(Actual name of the) “EDA Grant Recipient” in black;

Lettering: Specific fonts are named below; positioning will be as shown on the attached illustration.

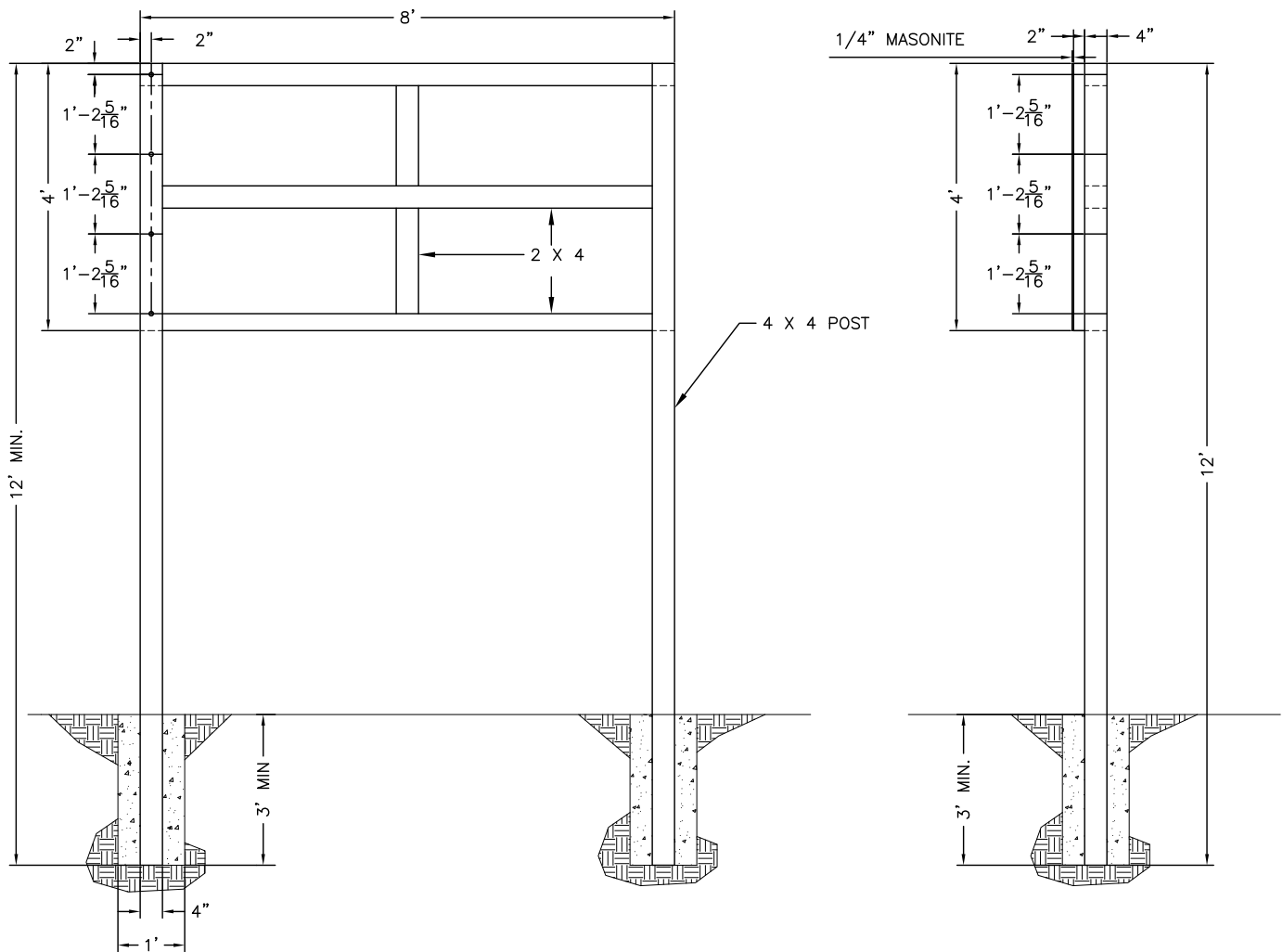
“U. S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT
ADMINISTRATION” use Bank Gothic Medium - **BANK GOTHIC MED**

“In partnership with” use UniversTM 55 Oblique - **Univers 55**

(Name of) “EDA Grant Recipient” use UniversTM Extra Black 85 **Univers 85**

Project signs will not be erected on public highway rights-of-way. If any possibility exists for obstruction to traffic line of sight, the location and height of the sign will be coordinated with the agency responsible for highway or street safety in the area.

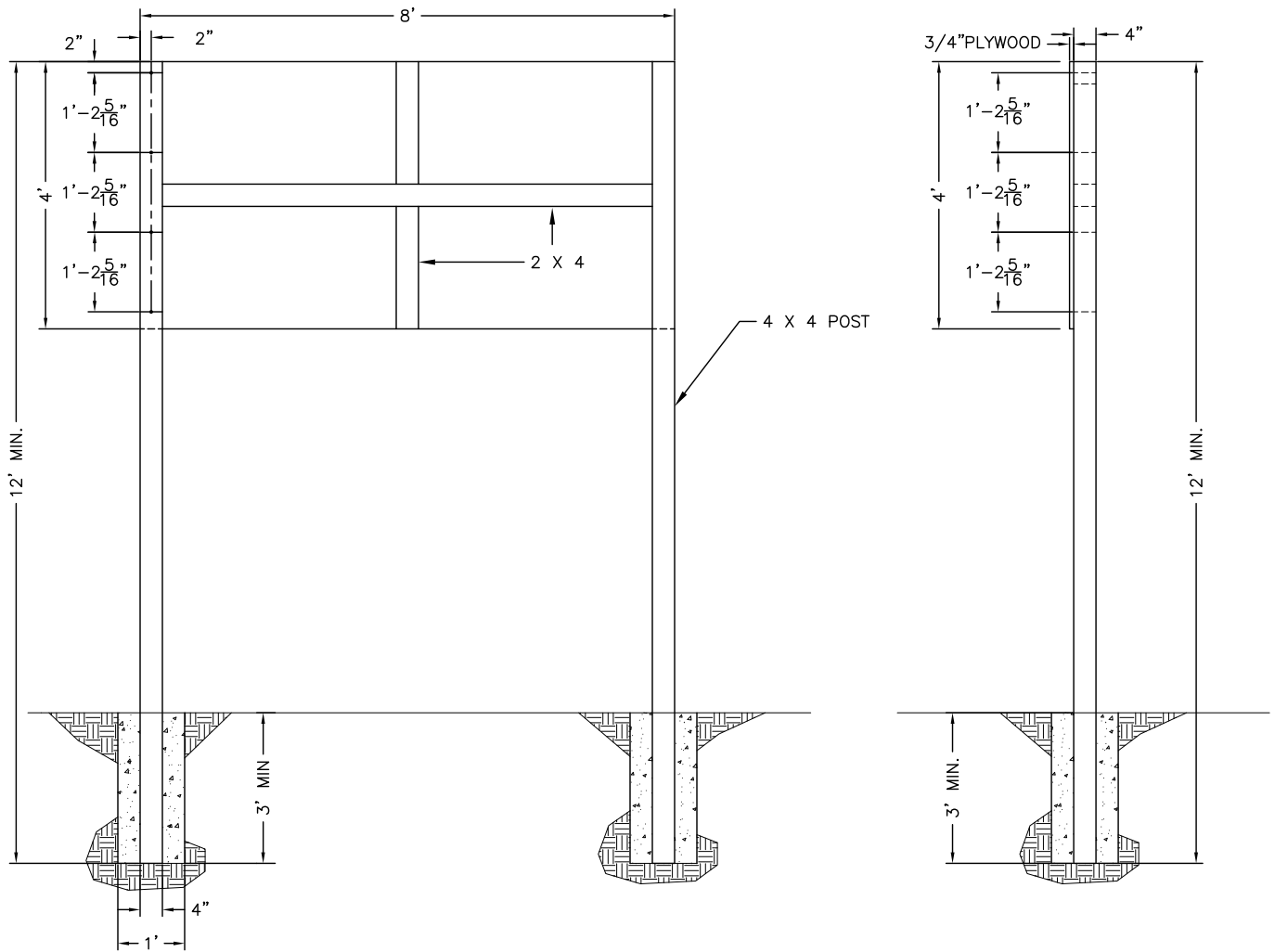
The EDA Regional Director may permit modifications to these specifications if they conflict with state law or local ordinances.



SIGN A
MASONITE SIGN
SCALE: $\frac{3}{8}'' = 1'$

PROJECT – SIGN A

ECONOMIC DEVELOPMENT ADMINISTRATION



SIGN B
PLYWOOD SIGN
SCALE: 3/8" = 1'

PROJECT – SIGN B

ECONOMIC DEVELOPMENT ADMINISTRATION



EDA

U.S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT ADMINISTRATION

In partnership with

<EDA Grant Recipient Name>

